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MENTAL SUGGESTION

PART I.

MENTAL SUGGESTION

BY

DR. J. OCHOROWICZ

SOMETIME PROFESSOR EXTRAORDINARIUS OF PSYCHOLOGY AND NATURE-PHILOSOPHY
IN THE UNIVERSITY OF LEMBERG

WITH A PREFACE BY

CHARLES RICHET

TRANSLATED FROM THE FRENCH BY

J. FITZGERALD, M. A.

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CONTENTS.

PAGE

Preface, ... 5

PART I.

EXPERIMENTS AND OBSERVATIONS OF THE AUTHOR.

CHAPTER I.—Apparent Mental Suggestion, ... 10
II.—Probable Mental Suggestion, ... 42
III.—True Mental Suggestion, ... 60
IV.—Experiments at Havre, ... 81
V.—New Experiments, ... 97

PART II.

FACTS OBSERVED BY OTHERS. EVOLUTION OF MENTAL SUGGESTION PHYSICAL ANALYSIS.

CHAPTER I.—Organic Sympathism, ... 105
II.—Sympathism and Contagion, ... 118
III.—Transmission of Emotive States, . . . 146
IV.—Transmission of Ideas, ... 161
V.—Direct Will-Transmission, ... 196
VI.—Will-Action and the Question of "Rapport," 212
VII.—Action Unbeknown to the Subject and Against His Will, ... 231
VIII.—Deferred Mental Suggestion, . . . 249
IX.—Mental Suggestion at a Distance, . . . 258

PART III.

THEORIES. CONCLUSIONS. APPLICATIONS.

CHAPTER I.—The Hypothesis of Exalted Perception, . 287
II.—The Hypothesis of Brain Exaltation, with Paralysis of the Senses, ... 292
III.—The Hypothesis of Direct Psychic Action, . 295
IV.—The Hypothesis of Direct Physical Action, . 299
V.—The Hypothesis of a Universal Fluid, . . 303
VI.—The Hypothesis of Psycho-Physical Transmission, ... 317
VII.—The Elements of a Scientific Explanation, . 320
VIII.—The Law of Reversibility, ... 332
IX.—Final Suppositions, ... 337

Appendix, ... 353

PREFACE.

This book, the title of which will, perhaps, scare those who fear novelty, is not a work of imagination, but of experience. A multitude of facts are set forth herein, that have been observed as well by the author himself as by sundry experimenters. It is a collection of facts, and nowhere else can you find brought together so many data. But it is not enough to accumulate facts—the facts must be rightly observed. In this respect Mr. Ochorowicz's criticism of the facts he has witnessed, or that he cites from the accounts given by other scientific men, is as rigorous as is called for by a subject so difficult. The most notable thing in his work is the resolute, unflagging determination to weigh all objections, to put away all causes of bad faith, whether conscious or unconscious, to take note of the difficulties of the problem, sometimes magnifying them, and not to be content till every possible cause of illusion has been removed.

The task was difficult, and it is much to have attempted it under conditions so stringent.

To demonstrate mental suggestion it suffices to eliminate two causes of error :

First, the error due to fraud. And when I say fraud, I do not mean willful deception plotted, contrived, studied beforehand—that is very rare ; but unconscious, automatic fraud (so to speak) produced by the natural tendency that is in all of us to wish to make an experiment successful when once we have taken it in hand. Hence, we must first of all make sure that no involuntary indication can have been given; in other words, that there has been no word or gesture or touch that could lead the person that answers to give preferably such or such response.

The second cause of error is chance. Chance often brings about amazing coincidences. Now, mathematical certitude is never attainable in cases where chance may play a part ; nevertheless, there is a moral certitude resulting from the continuous success of many experiments, the probability of any one of which is weak.

Mr. Ochorowicz has sought to eliminate these various difficulties; he finds a certain number of cases which he regards as conclusive—

and I think I may say that he is pretty exacting in the matter of proofs. In consequence of certain decisive experiments he has reached a conviction, and naturally he strives to make his readers share it with him.

And yet I do not think that his book, strong as it is in proofs, will convince all, or even many persons. I know too well (from my own experience) how difficult it is *to believe what we have seen* when it does not accord with the general tenor of our thoughts, with the commonplaces that underlie all our knowledge. A fortnight ago I witnessed such or such an astonishing fact, and I was convinced. To-day I toss my head and begin to doubt. Six months hence I shall no longer believe it at all. This is a curious anomaly of our mind. To produce conviction, it is not enough that a fact is proven logically and experimentally; it is necessary, furthermore, that we, so to speak, become intellectually habituated to it. If it clashes with our routine, it is rejected, spurned.

This is what is commonly called "common sense." Common sense it is that makes us reject all new and unexpected thoughts; that regulates our conduct and governs our opinions.

And yet this much-lauded "common sense" is little better than a routine of the intelligence. To-day's common sense is not the common sense of a couple of hundred years ago, or of a couple of thousand years ago. A couple of thousand years ago it was common sense to believe that the sun revolves round the earth and at even sinks into the ocean. A couple of hundred years ago it was common sense that one cannot in one day send a message to Pekin and receive an answer; but to-day common sense says that one can send a telegram thither, answer prepaid. To-day common sense commands that an army of a million soldiers be maintained, with five million muskets. Two or three centuries hence will not this common sense seem astounding absurdity?

Hence, if mental suggestion is opposed in the name of common sense, the common sense of the present year is meant, for the common sense of ten years hence will have quite other tendencies. It is only a question of time, and I dare say that after a few years this idea, having made its way into people's minds, will be found quite matter-of-course. People will, perhaps, even marvel that we should have found so much difficulty in accepting it. Do we not see the immortal discoveries of our great Pasteur, though proved by a superabundance of demonstrative experiments, nevertheless meeting an astonishing amount of opposition? What stronger evidence is needed of our incurable routine?

Not that I consider mental suggestion as rigorously proven once for all. Certainly not. Strictly demonstrative experiments are rare. In general, when they are conclusive (by concordance of results) they

are not irreproachable in other respects ; and when they are irreproachable, they are not conclusive. But some there are that are at once irreproachable and conclusive ; they will be found set forth in this book, and the reader will be able to judge of their importance.

After the facts, the theories. Of these there are many, but to me they do not seem to be of any great importance. The essential thing is to establish this fact, that *independently of any phenomenon appreciable by our normal senses, or by our normal perspicacity, how quick soever it may be supposed to be, there exists between the thought of two indididuals a correlation such as chance cannot account for.*

The demonstration of this proposition is, to my thinking, the fundamental point. And though Mr. Ochorowicz and others before him have amassed proofs, these do not produce absolute, complete conviction, but only doubt : so strong in its action upon our ideas is the influence of routine and of habit.

But whatever the opinion ultimately formed as to the reality of mental suggestion, it ought not, I think, to influence one's judgment as to Mr. Ochorowicz's book. Everybody, it seems to me, must recognize his sincerity, his perseverance, and his contempt for ready-made opinions. One feels that he has a passionate love of truth. That is an encomium that every man of good faith will appreciate.

CHARLES RICHET.

PART I.

EXPERIMENTS AND OBSERVATIONS OF THE AUTHOR.

"THE MAN WHO, OUTSIDE OF PURE MATHEMATICS, PRONOUNCES THE WORD IMPOSSIBLE, LACKS PRUDENCE."—ARAGO, in his *éloge* of Bailly.

THE limits of the possible are receding. The experimental method, after having founded positive psychology, is itself introducing us into the domain of the miraculous.

"Hypnotism" is henceforth part and parcel of science, and "suggestion," which produces most of its wonders, no longer surprises us; on the contrary, we constantly refer to it as explaining other phenomena still harder to understand.

Yet with *mental* suggestion the problem grows complicated. The explanation offered by the Commission[1] of 1784, viz.: "imagination and imitation," no longer suffices. One loses one's way; one seems ready to spurn science and to go headlong into occultism.

This limit once overpast, and mental suggestion accepted, may we flatter ourselves with the thought that there is some other phenomenon still more extraordinary to study?

But what matters it? Truth has nothing in it to make science afraid. This truth may even be absolutely at variance with current opinions, but none the less is it worthy of being studied with care, for nothing is so helpful to progress as a discovery that contradicts dominant theories.

But—is this a discovery? Is it a truth? That is the whole question.

Let us for the nonce put away scruples; let us double our habitual precautions, our tests, and let us examine the facts. An experiment

[1] Appointed by the French Academy to investigate "Mesmerism."—*Translator*.

is always instructive, even when it involves an illusion. Saved from the trouble of explaining the experiment, we shall have to get at the illusion; and if we succeed in accounting for that, why there is a result at all events.

And now, kind reader, if we are agreed as to principles, let us begin our little journey in search of a phenomenon in Mental Suggestion.

CHAPTER I.

APPARENT MENTAL SUGGESTION.

I MUST, first of all, confess that a year ago I did not believe in mental suggestion—not only did not believe in it, but the question did not to me appear to be important enough to warrant a special study. Yet several times I had tested the alleged action of thought upon a certain number of subjects.

First at Lublin, in 1867,[1] I experimented on a youth of seventeen, one pretty difficult to endorm,[2] but who, once in the somnambulic state, presented certain interesting phenomena.

For example, he would recognize any person of his acquaintance who might simply touch him on the back with a finger. Once he distinguished in this way as many as fifteen persons, one after another; and I must add that some of these persons entered after he had been endormed.

Though he showed a little hesitation with regard to persons that did not belong to the circle of his habitual acquaintance, he always distinguished my touch from that of every one else; and once he recognized a lady that had entered unknown to him, and whom he had seen for the first time several days before.

How could he do it?

As for the difference between the magnetizer and a stranger, it is very clearly recognized by many somnambules. The magnetizer's touch is to them either agreeable or indifferent, while the touch of any other person causes them pain. Why? Because these persons, say the magnetizers, are not "in rapport" with the subject. But that phrase does not tell us much. What, then, is "rapport?"

To state the question clearly, it is first to be observed that this phenomenon does not exist in "hypnotism" properly so-called. Let an hypnotized subject be touched by whomsoever, and if that touch

[1] That same year appeared my first work on "Magnetism" (Warsaw, 1867, *Gazeta Polska*).

[2] In French, *endormir*—to put to sleep; to put in the magnetic or the hypnotic sleep.—*Translator.*

causes him pain, then the touch of all other persons will have the same effect. He hears either everybody or nobody, obeys everybody, and can be awakened by any one.

It is not always so in the magnetic sleep, so-called, produced not by an inanimate object (a shining button, for example), but by a magnetizer, and especially by passes.

Now, every person has his own way of touching, and when one is accustomed to it, one readily notices the contact, the warmth, or the pressure of a strange hand. Some domestic animals, cats especially, will not suffer strangers to fondle them. If we stroke with the hand a sleeping cat that shows this idiosyncrasy, we easily recognize the fact from the difference in the reflex movements. The cat stretches herself out at full length languorously if it is her mistress that strokes her; if it is a stranger, she awakes dissatisfied and runs away.

The isolation in which the magnetized subject exists, and the possibility of his concentrating his attention better than in waking, facilitate this differential sensibility. It is strengthened by exercise, by habit. The subject takes those impressions best to which he is accustomed; sometimes even they become for him a need, an agreeable necessity, whereas unexpected and unwonted sensations confuse him.

But when there is question of distinguishing between strangers, this explanation seems no longer sufficient, even though we suppose molecular differences of touch—differences probable indeed, but not proved; which, besides, would have to be known beforehand, through habit, so that the subject might from them infer correspondence between a certain physical sensation and a given psychic personality.

Have we, then, here mental suggestion?

To recognize a person is to recognize in particular his *psychic* personality; that is, to recognize that living whole, inwardly active, whereof the external tactual manifestations are but a weak reflection. If, then, it were proven that the *ego* of a person can act upon the *ego* of the subject, that were a direct explanation, and it would be relatively adequate. The person touching thinks of himself; his mental state may be represented by an affirmation ("It is I") and a question ("Do you recognize me?"). All the persons present are looking at him, and, of course, thinking of him; hence, the whole company influences the subject, and this influence constitutes suggestion.

But if such an explanation is to be accepted, mental suggestion must be proved to exist, while these experiments are far from proving it by themselves. Hence, I turned to another explanation, more natural, indeed, though rather complex, *viz.*, that there was suggestion on the part of the company, but not mental suggestion. The subject was blindfolded, but as I called his attention to the people around him he could hear all that passed; he was at home, habit made him familiar with every possible noise of doors, furniture, floor; he was

intimately acquainted with the eight or ten persons present before his sleep; those who, at a given moment, did not take part in the experiment would freely exchange a few words in a high voice, while the others would request silence; the hearing of familiar voices enables one pretty accurately to determine the position of different interlocutors; and the noise made by the unavoidable changes of place helps one to complete or to correct one's judgments as occasion may require.

All these inductions may have been perfectly unconscious. In some respects we are better observers in dreams than in the waking state. The imaginary scenes of our dreams represent persons of our acquaintance in strict accordance with their characters and habits, reproducing their favorite sayings, and no end of physiognomic signs that our conscious observation takes no note of. Hence, it well may be that a somnambule, who has no distractions, whose whole recollection and whose every sensation contribute to one single perceptive act, can make out better than we the connections of certain signs.

The only fact that struck me as rather unaccountable, was the somnambule's recognition of the lady whom he had seen only once; but that incident presented some peculiarities of a kind to serve as pointers. The rustling of a silk robe behind his chair betokened to the subject a woman, and she a stranger, for the women of the house had no such robe. She hardly touched him, thus plainly showing timidity; *ergo*, more likely a spinster than a married woman; of the young ladies likely to come to the party in a silk gown, Miss W. stood among the first; *ergo*, it is Miss W.

Consequently, in the facts described, we have only *suggestion by conjecture*.[1]

Here is another experiment made upon the same subject, and apparently still more extraordinary. The problem was, to determine whether there was vision without the aid of the eyes.

I take up a book at such distance from the subject that he cannot see what it contains, and I open it anywhere. I then bid him read.

"I do not see clearly," he answers. I suggest to him the first two or three words of the page, and ask him to go on with the rest. "That is in the middle of the second volume," says he, naming the chapter; "it is Kraszewski's novel 'The World and the Poet.'" "Just so," I answer; "go on, then." And to our great astonishment he goes and reads a whole page, with hardly a slip. Whenever I laid the book aside he stopped; he "read" fluently when I kept my eyes on the text. I turned over a page; still he read well.

Some of the persons who witnessed this experiment thought they had here a demonstration of "second sight," despite the explanations I offered, and which I will state presently.

[1] We shall see later that the explanation of "rapport" given here is in many cases inadequate.

But if it was no "second sight," do we need a better proof of mental suggestion?

Unfortunately, we do! For, first, he "read," though less well, while the book was closed; he needed only to have the opening phrase of a passage given him—therefore it was not thought-transference; neither was it second sight, for without that suggestion of the opening words he could not even read the number of the page, or make out anything whatsoever.

Here is the explanation of the mystery: The youth had shortly before read twice over the novel by Kraszewski already mentioned—had read it as people used to read in Poland in those days, and particularly those 17 years of age. He knew it almost by heart. Evidently he could not recite page after page *verbatim* in the waking state; but the one thing that our experiment proves is, the astonishing *activity of recollection in somnambulism.* And as for the influence of my thought, that is a very simple matter; the subject "saw" better while I was looking in the book, because then I used to correct his little errors. It was these errors that suggested to me the true explanation of the phenomenon; for instead of reading faultily a word in the text, he substituted another word of like meaning, but totally different in form. The regular train of association being thus interrupted, he used to come to a stop if the book was shut, for I could not come to his assistance.

In spite of these failures, I still tried to obtain direct mental suggestion.

1. The subject was required to repeat my gestures, made in an adjoining room, with the door ajar. These experiments yielded no striking result—merely a few coincidences from time to time.

2. With eyes blindfolded, he was required to come to me, passing through several closed rooms.

This experiment was always successful, but it was necessary to inform him in a general way that it was about to be performed. Then, always after a delay of several minutes, he would find me. Quite evidently he was conscious of my presence as soon as he found himself in the same room; but that was no proof of mental action, more particularly because all tests made without previous notice—*ex improviso*—gave only negative results.

3. He was required, by touching my hand, to find out the thought in my mind. Result: little or nothing, though there were a few successes.

I account for a certain number of coincidences as follows:

1. He and I were comrades, living together under the same conditions, and not seldom did it happen that we had the same thoughts simultaneously.

2. The gestures that were repeated at a distance were customary

gestures and attitudes, which are very few and which might easily have been guessed at random. I remember, for instance, having begun the experiments by an order "to raise the right arm." Now this is the first thought that occurs to one who wishes to experiment on mental suggestion, just as when one would prove free will one usually strikes the table with the fist, saying "I can strike or not strike."

As the subject did raise the right arm, but did not carry out the orders that followed, I had the right to judge that simultaneously, though independently, he had the same thought that I had. Be it added that he was notified in advance that he was to perform certain movements mentally ordered by me.

In 1869 I renewed these experiments at Warsaw with an Italian lady said to be "lucid," and whose performances were much talked about. One thing remarkable about her was the almost total insensibility of the pupils of her eyes to light, in the state of general contracture. Having endormed her and applied tests, I was surprised to observe the very great facility with which she recounted her somnambulic dreams; it was indeed a pleasure to hear them. As for "lucidity," or clairvoyance properly so-called, it was very obscure, and not even once did I succeed in arresting the tide of her eloquence by a mental order.

Further on it will be seen that in the state of active somnambulism, when the somnambule talks much of herself, mental suggestion is not possible.

The same year I made also some "spiritist" experiments, which have a bearing upon our subject.

They came about in this way: A sober-minded man one day attended a table-turning seance. Seeing the infatuation and the ready enthusiasm of the company, as they amused themselves with unconsciously pushing the table, "I will believe in the spirits," he said, "if they tell me the forename of my grandfather."

He was himself advanced in years, and was confident that no one in the company knew his grandfather's name.

"It may be that the spirits themselves do not know it," gravely remarked a spiritist who was managing the experiments; "but if you concentrate your thoughts upon the name, which you alone know, they will be able to tell it you."

Some one recited the alphabet, and the knocks on the table when the corresponding letters were pronounced made up the fore-name "Adalbert"—the correct name.

"This is diabolism," said the serious-minded one, and he vowed to himself that never again would he witness the doings of spiritists.

When he told me the story, I was justified in supposing the case to be one of mental suggestion. As I did not believe in the spirits, I

must needs resign myself to this latter hypothesis, or else adopt the hardly probable explanation that it was all mere chance. Nevertheless, considering the complexity of this kind of experiments, and the probability of some sort of illusion, I decided to accept nothing save what should be proved by an experiment to be made by myself under well-known and clearly-defined conditions.

Soon an opportunity was offered to apply the test.

Of the five persons (young women mostly) seated round the table, none, as I was assured by all, knew the name of the grandmother of a certain aged lady, who took no part in the experiment. That name was spelled out. But on investigation I found that one of the girls that turned the table must often have heard the name pronounced; she herself admitted to me that in the course of the seance she had recollected the name, which a few minutes before she believed she had never known.

That sufficed to justify belief in a more or less involuntary influence of her muscles.

I then thought of a purely fictitious name known to myself alone.

The table answered with another name having no resemblance whatever to the one in my mind. I pretended to write a word on a bit of paper. The answer of the table was "louche"—a word that no one had thought of. This showed that the unconscious imagination of the mediums was bound to go astray when it was not guided by some sort of suggestion.

Let us pass to another experiment. Before coming, I had prepared a photograph of one of my friends, putting it in a sealed envelope.

"What is in this envelope? Is it a letter, a bank note, or a photograph?" (I give the question *verbatim*, according to my notes.)

"It is a photograph."

"Of a man or of a woman?"

"A man."

"How old?"

The table gave 23 knocks, which was correct. The believers were delighted; but on reflection, after recalling all the circumstances, I was unable to agree with them.

First, the probability of the correct answer being made was very great—for the first question, 1 to 3; for the second, 1 to 2; as for the third question, the probability there was considerably less, but—I had made a slip which no doubt decided the result. For when the table, after giving 23 knocks, stopped for a moment, I hastily exclaimed "That's it!" But before coming to the twenty-third knock the table had stopped now and then, *and I had said nothing*. The impression left upon my mind was that had the knocking not been stopped by my exclamation, the table almost of a certainty would have kept on knocking.

Next, I noticed that the envelope showed pretty plainly the shape of a photograph card, slightly curved, and manifestly stiffer than a letter or a bank note.

Finally—and this is a point not easy to make plain—I felt distinctly that in that company, and under the conditions given, a photograph of a man was much rather to be expected than the photograph of a woman.

Hence this was a case of suggestion by conjecture, and perhaps a matter of chance.

Here is another instance of apparent success:

I request a lady, not of the mediums' set, to pass to another room, to write some number on a bit of paper, and not to show it to any one.

Upon her return, I ask the table:

"How many figures are there?"

"Two."

"What is the first?" I then name all the numbers, zero included, but the table makes no sign. I begin again:

"Is it *one?*"

"Yes." (It had been agreed with the "spirits" that one knock was to mean *yes*, two knocks *no*.)

"And the second figure?"

The table gave 6 knocks. But we had hardly come to the sixth when the lady exclaimed: "It is astonishing; I wrote 16!"

I must add that she could not decide what number to choose. "Must I write one figure or two?" she asked of me before quitting the room.

"Any number at all," I replied, "one of two or three figures, for instance." Thus the suggestion of *two* figures was given by inadvertence.

We began again, and this time under stringent conditions. I alone knew the number, and I wrote 4; the table guessed 346.

In 1872 a young German lady of high sensibility and delicate constitution, subject to hysterical fainting fits, suggested to me the thought of a new trial. I had made a series of observations upon her pulse changes in various phases of somnambulism. But in her case the psychic phenomena were of little moment, while mental suggestion would not work at all.

I will pass over a multitude of experiments made with persons in the waking state unbeknown to them—making a person, whose back is toward you, turn about when you order him to look at you. These experiments have now and then been successful, but never under stringent conditions. Once, however, the appearances surprised me a good deal. I was in a ballroom. A young woman attracted my attention by her peculiarities of feature; so I often looked toward

her, and fancied that whenever my gaze was fixed upon her for any length of time, she would turn her head and look in the direction of me. Still she could not see me. To verify the phenomenon, I chose a less favorable moment and succeeded. I tried once again, and the success was the same. Then, being in an adjoining room, I said to a friend : "Let us make a curious experiment. Do you see that girl in the corner of the ballroom? I will make her come hither." A minute afterward the young lady rose, entered the room, remained for a moment undecided, cast a look of interrogation upon us, and then went back to the ballroom.

I made her acquaintance a few weeks later. On being tested with the hypnoscope [1] she presented only a slight numbness of the finger. She was rather hard to endorm (15 minutes), and the sleep was very light and was soon over. *No experiment in mental suggestion was successful.*

Was it then an illusion? I believe it was.

Having reflected upon the case, after making the acquaintance of the subject, I interpreted quite differently my prior successes. In the first place, it was nothing surprising that she turned her head while I was looking at her, for having heard of me, she wished to make my acquaintance ; and it is even probable that, through a very common illusion, I fancied that I had first noticed her "because of her peculiarities of feature," whereas, in fact, she had for a good while been observing me, and so had, unconsciously, perhaps, given direction first to my attention and then to my experiments.

This incident gave me a disgust for mental suggestion, and many remarkable subjects came under my hands without awakening any desire to test with them the transmission of thought.

I recall another discouraging circumstance :

I went to an "extraordinary" exhibition given by a certain "Vicomte de Caston," who performed feats of memory and præstigiation, improvised verses, read without the aid of the eyes, and divined thoughts. The seance was highly interesting to the psychologist. I say nothing of tricks of the common sort; albeit here, I am free to say, is a study that I heartily commend to every psychologist who is curious about hypnotism in general and mental suggestion in particular. Sleight-of-hand is the result of an ingenious application of the psychology of attention,[2] involuntary associations, illusion, and reflex movements, rather than of psychic power. In hypnotism

[1] This is the name I have given to a peculiarly shaped magnet, which, applied to a finger, serves to show one's hypnotic sensibility. With few exceptions, this instrument always gives positive results, and it is very convenient for use, for its application lasts only two minutes. (See Appendix I.)

[2] See the remarkable work of Ribot bearing that title (Humboldt Library, No. 112). —*Translator.*

the great præstigiator is Hartmann's Unconscious: if one is not to be its dupe, one must be "up to its tricks."

But among the performances of this "vicomte" the thing worthy of mention here was a series of tricks grounded solely on *the association of ideas.*[1] We know how easy it is, by a very simple ruse, to make a person select a given card from among many. You have only to exhibit before his eyes the cards of the pack, one after another, rapidly, but in such a way that only one shall be fully and distinctly visible. You thus trick the subject's vision, and he selects the suggested card as a matter of course. Our psychologic præstigiator had developed this method, applying it to operations purely mental. Having in readiness a certain number of envelopes, sealed and containing a word written beforehand, such as "rose," "diamond," "negro," he opened a lively conversation with the audience. Discoursing *de omnibus rebus et quibusdam aliis*, he would stop just at the moment when the most direct and the most inevitable association was with one of the predetermined ideas. Then by a clever detour he came round again to the same association, *which he never expressed*, and suddenly asked a person he deemed to be absorbed in the performance, to think of some object.

The object thought of was always the one suggested.

All he had to do now was to ask to which of the three kingdoms, mineral, vegetal, or animal, the object belonged, to insure success, and to prove to the person interested that his thought had been written down by itself in a sealed letter.

As the experiment just described is but a conscious utilization of a mental process that is daily and hourly repeated in ordinary life, it follows that in very many cases the *psychic atmosphere* of a company suffices to account for unexpected coincidences of thought between the experimenter and his subjects—coincidences all the more surprising the less one knows about the unconscious mechanism of these suggestions, *mental* suggestions, if you please, though they have nothing to do with thought-transference. Ever since that time I have held that in a successful experiment in mental suggestion there are always *two* questions to be settled. The question, How did the subject divine the thought? is but the second; while the first is, How came the experimenter to choose one thought rather than another? We can judge of the scientific value of an experiment only according to the intimate relation between these two processes.

Whenever several persons hold a conversation for any length of time, there arises between their minds a reciprocal enchainment. A clever observer has then but to isolate himself from this involuntary mechanism and to grasp it mentally in a general view, and then

[1] See "Diseases of Memory," by Ribot, (Humboldt Library, No. 46).—*Translator.*

sometimes he can *foresee* the object that some moments later will occupy the attention of the company. It is this same mechanism that often causes two persons in a company to express the same thought or to raise the same question. The better one knows those about him, the greater his success in this psychic "clairvoyance." I remember how once, being secretary of a society, the object of which was the publication of an encyclopædia of the sciences, I wrote in advance the notes of one of our meetings. The question before the society was whether theology should be reckoned among the sciences that were to be treated. There were two priests on the committee. Knowing the members and their views, I risked the experiment. The "minutes" were written out; they gave an account of the general discussion, and closed with this resolution: "Resolved, that theology ought not to be treated, save as constituting a part of the history of religions." I had to change only a few words in order to submit the minutes to the members for approval.

Of course, one cannot be so good a prophet unless he is in some degree an accomplice; but one is always an accomplice when one orders the carrying out of a thought that comes to us mechanically. For instance, you are a frequent visitor at a house. You do not recollect the fact that at your last visit the conversation was about colonial policy, and that immediately after it was over a lady sat down at the piano. The talk is now again about colonial policy, and the thought occurs to you to make an experiment in mental suggestion. So you order (mentally) the lady to go to the piano—and she goes. You are amazed at your success—all the more because you see no connection whatever between colonial policy and a piece of piano music, and because your chum assures you in all sincerity that in some quite inexplicable way the idea came suddenly to him to take a seat at the piano.

We may utilize this unconscious process with deliberate purpose: My friend P., a man no less absent-minded than he is keen of intellect, was playing chess in a neighboring room. Others of us were talking near the door. I had made the remark that it was my friend's habit, when he paid closest attention to the game, to whistle an air from "Madame Angot." I was about to accompany him by beating time on the table. But this time he whistled something else—the march from "Le Prophète."

"Listen," said I to my associates; "we are going to play a trick upon P. We will mentally order him to pass from 'Le Prophète' to 'La Fille de Madame Angot.'"

First I began to drum the march; then, profiting by some notes common to both, I passed quickly to the quicker and more *staccato* measure of my friend's favorite air. P., on his part also suddenly changed the air and began to whistle "Madame Angot."

Every one burst out laughing. My friend was too much absorbed in a check to the queen to notice anything.

"Let us begin again," said I, "and go back to 'Le Prophète.'" And straightway we had Meyerbeer once more with a special fugue.

My friend knew that he had whistled something, but that was all he knew.

One who knows a person's habits can sometimes imitate mental suggestion, even without any suggestive impression.

In the Medical Faculty of X., we had a professor of philosophy, who, in giving his lectures used to look first to the right, then to the middle of the room, then to the left, again to the right, and so on, with the regularity of a pendulum. In this little habit there was nothing offensive to any one, and it had passed unnoticed. One day he was proving to us the psychic liberty of man.

"You will soon see his freedom of will," said I in pleasantry to my fellow students. So extending a finger, I began to give orders for the movements his head was to make to the right, the middle, the left.

Do not think that this anecdote has no bearing upon our subject. Of course, the thing was but a piece of pleasantry ; but had it been taken seriously it would have been a deception. Now, in hypnotism, physiologists are liable to just such deceptions, involuntarily, if while understanding well how to observe external facts, they do not know how to observe their own selves. Here is an instance of this from my own experience : it comes fully within the class of apparent suggestions.

I was treating by hypnotism an elderly lady suffering from chronic arthritic rheumatism. I put her asleep very readily, and absolute repose of half an hour (*aideic*[1] state) always sufficed to calm her nerves, and to improve her natural sleep, at least for a few days. There was no means of producing somnambulism, properly so-called, or of making the subject talk (*polyideic*[1] state), so I left her, and occupied myself with turning over the leaves of a book, and awaiting the time of her awaking. One day I thought I should awaken her by a mental order. "Awake," said I to her mentally, and at once there were contractions of the face muscles ; the eyes opened, and she was awake.

Some days afterward I tried to make her perform certain movements, but in vain ; but I succeeded in awakening the subject as before, though not so promptly. Still, it was a surprise. But why did she awake, and yet prove insensible to other suggestions ?

The reason was this : Here were two habitudes that had passed unnoticed. Continuing the treatment for several weeks, I had fallen into the habit of awakening her just half an hour after sleep had

[1] Aideic (Greek, *a*, privative ; *idea*, idea, thought), without thoughts. Polyideic (Greek, *polys*, pl. *polloi*, much, many ; *idea*, thought), with many thoughts. Monoideic (Greek, *monos*, single ; *idea*, thought), with one thought.—*Translator*.

become manifest. I did not look at my watch, but went always at the fixed time ; and as that was one hour before dinner, my stomach took the place of my watch perfectly.

The patient too had acquired the habit of waking almost precisely on the minute—a phenomenon familiar to magnetizers. This does not happen in every case, but it does happen very often.

This suspicion occurring to me, I resolved to find out whether it was correct. I readily found

1. That I was unable to awaken her "mentally" 10, 15, or 20 minutes after she was sound asleep.

2. That she always awoke of herself after 30 or 35 minutes, without any mental suggestion.

Thus we were in just the condition of our anecdote, except that in the one case the cause of the coincidence was known from the first, in the other it was not.

In 1881 I attended, in Lemberg, the magnetic seances given in that city by Donato. Among his performances was one which, though not presented as an instance of mental suggestion, nevertheless wore all the appearances of one. Miss Lucile, who was blindfolded, remained upon the stage, seated, while Donato went among the audience and invited persons to name to him, in a whisper, a certain number of acts for the somnambule to perform afterward. For instance, to fan herself with Mrs. N's fan ; to spread Mr. X's opera hat and put it on his head ; to take Mrs. Y's bracelet and put it on the arm of Miss Z, and so on. It is to be remembered that the choice of acts to be done is very restricted, the same thing pretty nearly all the time, yet there was no trickery ; the *psychic atmosphere* played its own part.

Donato, having received the requests that were made, led Miss Lucile toward the audience, and without speaking a word, solely with the aid of gestures made at the distance of one or two paces from her, then nearer, he conducted the "medium" to the persons in question, and she performed perfectly every act that had been requested.

This experiment made a deep impression, for it was evident that there was neither any understanding with the subject nor any collusion with the audience.

How was Miss Lucile able to perform these interesting feats ?

"By *magnetic education*" was the magnetizer's answer. It was vague, and yet true.

There exists in magnetism a phenomenon little studied by hypnotizers—that of *magnetic attraction*, so-called. It is enough to bring the hand near the arm of the endormed subject : at once that arm goes out in the direction of the hand and follows all its movements. Though the magnet produces the same phenomenon, one must not suffer himself to be deceived by the analogy. This attraction has

nothing in common with the attraction of iron by the magnet; it is not of a physical kind, but of the reflex order.

But that is a distinct question, which we need not touch at present. The important point, the one that has to do with the matter in hand, is that this faculty, possessed by very many somnambules, may be cultivated and improved by *magnetic education*. Little by little the subject becomes sensible to various attractions, and if to the automatic attractions there be added quick understanding of gestures, then the subject possesses everything that is needed for a marvelously perfect simulation of thought-transference.

At first the subject is influenced only from anear, and can understand only simple movements; later he grows accustomed to his magnetizer's ways, comprehends his inchoate gestures, and an automatic association is formed between the almost unnoticeable directions of the experimenter and certain reflex, or even voluntary, movements of the subject.

Thus was Miss Lucile able to execute the unspoken orders of Donato.

There is another and much simpler way of simulating mental suggestion. Donato himself has shown that by making certain motions with his fingers at Miss Lucile's ear, he could produce a hyperacusia [1] sufficient to enable the subject to hear words spoken so low and with lip-movements so slight that even persons on the watch for them and observing attentively were unable to hear anything. I have repeated this experiment many a time, in one case—to mention no others—with a peasant woman of Zakopane in Galicia, who, though her ears were plugged and her head wrapt thrice around with a coarse thick kerchief, repeated words spoken as low as possible by me at the distance of 13 feet.

Plainly with such a degree of hyperæsthesia the subject can:

1. Hear direct what is spoken in the ear of the magnetizer;

Or, 2, hear what later he whispers into her ear, unheard by the bystanders.

Donato kindly held for my behoof a private seance, at which I had an opportunity once more to experiment on mental suggestion. The magnetizer himself expressed some doubts upon that head. The phenomenon he believed possible, and he had once demonstrated it in the presence of Mr. Arkasof; but according to him the experiment is but seldom successful—how, no one knows; in most cases it miscarries—why, no one can tell.

We made the attempt, nevertheless.

Miss Lucile stood with her back toward us; I was on the right of the magnetizer, between 6 and 7 feet from the subject. The latter

[1] Hyperacusia: Greek, *hyper*, over; *akoue*, hearing. A super-sensibility of the sense of hearing.—*Translator*.

was to *extend the left arm.* After a minute there were some slight movements of that arm, or rather of the whole body—movements that may have been produced by the subject's fatigue, and may have had no relation to the intentions of the magnetizer. This was readily admitted by Donato. "I should be more sure of a result," said he to me, "if you would allow me to act by gestures." But that was not the question; undoubtedly, he could, acting by attraction, cause the the arm to be extended.

Other attempts had no better result, whether it was I that gave the order after endorming the subject, or whether it was Donato himself. I simply proved again what I had already proved with one of my first subjects, to wit: the subject's power of recognizing the person that touches her on the back (through the clothing). When Donato endormed her, a touch from me caused her pain; the contrary was the case when I myself magnetized her, but she always bore more easily the touch of her customary magnetizer.

Care was taken that the subject should not be able to tell who touched her, except from the mere act of simple, slight contact.

This phenomenon I have since verified in nearly all highly-sensitive subjects, when *magnetized* (*not* hypnotized), and so I have been obliged to postulate an individual physical action not found in Braid's hypnotism.

This physical action is a matter of no slight importance in the problem of mental suggestion, as will be seen later, but evidently the one does not imply the other.

Notwithstanding this evolution of my views, I was still far from believing in thought-transference. On the contrary, the foregoing attempts discouraged me, bringing to light the full complexity of the question and all the causes of error.

One thing I had learned, to wit: that a skillful magnetizer who has a suitably trained subject, can imitate mental suggestion perfectly, or may himself be duped by unconscious associations. Witnesses in relating the performance, transfigure it, embellish it involuntarily, in virtue of the psychic faculty—of great value in art, but highly dangerous in science—which has been called "complementary imagination."[1]

By omitting details that seem insignificant, and magnifying others that seem essential to the understanding of the situation, one makes up in his own mind an experimental "demonstration" that in reality demonstrates nothing but one's own personal enthusiasm. If in narrating the facts for the first time one adapts them just a little "*in usum Delphini*,"[2] one will recount them the second time *pretty nearly*

[1] *Fantaisie complémentaire.*

[2] A famous annotated edition of the Latin classics was prepared in the reign of Louis XIV., "for the Dauphin's use"—*in usum Delphini.*—*Translator.*

as at the first, and the third *pretty nearly* as at the second; slight modifications then go on accumulating and little details drop out. Thus, persons little used to strict scientific method in the end will, in all sincerity, tell of things that never were. A scientific man will not go so far as this, yet he may easily permit himself to be fascinated by a novel and unexpected impression received under conditions that either cannot be, or that at least have not been, ascertained with precision. That is enough to lead to an erroneous *interpretation*, which may go so far as to assert the existence of a new phenomenon that does not exist at all. Lest I should be accused of exaggeration I give an example:

Mr. Hughes, inventor of the microphone, the printing telegraph, etc., a noted physicist and thinker, believed it to be demonstrated at the beginning of his researches that the microphone *increases* the intensity of sounds. That was an error of interpretation, caused by certain illusive effects. No microphone has ever amplified the intensity of *speech*, or of *sounds* in general; on the contrary there is always a notable reduction of the intensity. How comes the error, then? From the failure to distinguish between the *sounds* and the mechanical vibrations accompanying them. The microphone makes audible the tread of a fly over a thin planchette, but not because it amplifies the *sound*—which, indeed, is imperceptible directly—but because it *transforms* into sounds the mechanical vibrations of the fly's tread. Place near the planchette a watch that makes a far louder sound, and you will hear nothing; but set it upon the planchette of the microphone, and you will hear the ticking through the telephone a great deal better than you can directly, because in the latter case the mechanical vibrations are transformed into sounds, and these are added to the real sounds. Now, this error of interpretation has circulated so widely that even to-day you will find it asserted in works on physics that sounds are amplified by the microphone—in other words, a fact is said to exist that has no existence at all.

The case is often much the same with regard to mental suggestion. It is not the evidence for the naked fact that is at fault, but the interpretation of the fact—the determination of the causal relation between two phenomena that in themselves are verified easily enough. The thought of one brain is succeeded by a like thought of another like brain: is the case here like that when two telephones influence each other by the aid of undulatory currents? or are the conditions like those of the two watches supposed by Leibnitz, which, while indicating the same hour, were mutually independent? That is the question. And it must be added that between these two extreme situations there is plenty of room for an intermediate state of some complexity; for while independent in their mechanism, the two watches may be imperceptibly regulated electrically or pneumatically. Have the physicians

who like Barrier, Teste, Bertrand, Charpignon, Garcin, Despine, *et al.*, vouch for us the reality of thought transference—have they seen an actual transmission? They have seen only two watches that *sometimes* indicate the same hour. I was therefore justified in regarding their testimony as insufficient, and that for still another reason:

In order to judge aright of such a fact as this, one must of necessity have in mind the *suggestion theory* of hypnotism; one must ever remember that all hypnotic phenomena whatever may be produced by imagination alone, by *ideoplasty*.[1] Consequently, to make out a case of somnambulism produced from a distance, for example, it is not enough simply to verify the fact; we must furthermore have absolute certitude that it has not been possible for the subject by a combination of the circumstances or by the behavior of the person whose business is to observe him, to *presume* what the experiment is to be. Further, this presumption itself *may be unconscious even while it brings about the desired result.* On this point my hypnotic studies leave no doubt. In fact, even when the subject has anticipated nothing, when he declares that he has suspected nothing, one is not free from uncertainties. Hence, notwithstanding all that has been published by the priest Faria, by Hénin, Cuvillier, Bertrand, Braid, Durand, Gros, Morin, Szokalski, and Liébeault, the theory of suggestion was really not known and recognized till the publication of Dr. Bernheim's ingenious work. At one time the action of "magnetic currents" in space was found to be comprehensible, but it was held to be improbable that somnambulism might be produced by means of a letter (not magnetized) fixing the experiment for a given hour. The subject fell asleep a few minutes after a concentration of will at a distance, therefore it was the thought of the magnetizer and the "magnetic fluid," its agent, that produced the somnambulism; *post hoc, ergo propter hoc.*

For a long time these doubts seemed to me sufficient to withhold me from new experiments. But one always returns to his first love.

While giving at the University of Lemberg (1875–'81) a course of lectures on physiological psychology, I studied the different questions of hypnotism a good deal. Many of my students willingly offered themselves for all sorts of researches, and then it was that I began to see my way a little better in this mysterious region. One day I brought together six of my best subjects in a hall of the Polytechnic School, from which every ray of light was excluded, in order to test the alleged discoveries of Baron Reichenbach.[2] We remained three

[1] Ochorowicz, *Sur l'idéoplastie: classification des faits; et sur la théorie de l'idéoplastie* (*Comptes rendus de la Société de biologie*). Ideoplasty (Greek, *idea*, idea, mental image; *plattein* or *plassein*, to shape, whence *plastes*, modeler), imagination, or the power of conceiving, or forming, mental images. See Appendices II., III.—*Translator.*

[2] Reichenbach asserted that the "influence" of a magnetizer upon his subject is manifested in a dark chamber by luminous rays emanating from him.—*Translator.*

hours in absolute darkness, yet were unable to verify any of the statements of the German chemist. But to make amends, we discovered a new fact of considerable interest, namely, that certain hypnotizable subjects see far more distinctly the phosphorescence of an electric machine than do other persons. Threads of light, quite invisible to the rest of us, and forming a prolongation of the visible rays, were described perfectly by some of the subjects, and were objectively verified in divers ways.

I chose two of these subjects for an experiment in mental suggestion. The first, a youth of good stature and remarkably muscular, in good health, but highly sensitive to hypnotism (hypnoscope showed: irritation, anæsthesis, contracture) presented this peculiarity, that it was impossible to produce in him an hallucination or any word-suggestion whatever. Endormed by fixing the gaze, or by other equivalent means, he showed *a general contracture* and, psychically, a state of complete *aideism* (tetanic aideia). To make him talk, it was necessary to free the speech muscles, which were all contractured; and once a reply was obtained, he did not fall asleep any more; a certain dizziness and a general contracture alone remained. It was possible to awaken one hemisphere alone, and one-half of the body, but *somnambulism* could not be produced. He passed straight from the "lethargic" state to waking; but in waking, as well as in the lethargy, it was possible to produce by localized passes, insensibility, hyperæsthesia, attraction, catalepsy and contractures, but hallucination never. So pronounced was the neuromuscular hyperæsthesia, that to produce a local contraction or contracture one had only to bring near to any part of his body, divested of clothing, a finger, a magnet, or to project a ray of light, or even to look fixedly upon it.

If I endeavored to influence him mentally by ordering a movement, that movement was not performed, but the member on which I looked was seized with contracture. If instead of acting by look I acted by gestures, there was an exceedingly strong attraction of the whole body, and he performed all the acts indicated by the attractions, till a general contracture obliged him to fall rigid or to stand motionless. The rigidity had then to be removed by gentle massage in order to continue the experiment.

This special sensibility was developed little by little. The attraction did not manifest itself till the fifth magnetization. (All these experiments were reported to the Medical Society of Lemberg in 1881.) It was proven to my satisfaction that he was capable of being influenced by looks—though the experiments were not always successful when made *extempore;* but it was certain, at the same time, that mental suggestion by itself alone was always without result; there was no trace of effect. When *hypnotized*, he obeyed every one; when *magnetized*, he followed only his magnetizer; the latter alone could awaken

him, or cause the contracture to disappear, but always by massage, passes, gestures, by blowing on the subject, not by a mental order. Once or twice only did I succeed, in the state of momentary stupor of the brain prior to the awaking, in transmitting to him some *physical sensations*—as a painful puncture, a bitter taste—but even then there was uncertainty as to interpretation, and I could not guarantee the value of a few successes.

My other subject was also a young man, tall of stature, but not strong ; highly intelligent, rather anæmic and consumptive. He was very sensitive, even too sensitive, to all sorts of impulsions (hypnoscope showed analgesia, instantaneous contracture of the whole arm). The application of the hypnoscope at the pit of the stomach produced in him a series of peculiar phenomena—sensations, contortions, sharp long-drawn cries, and rotary movements of the arms, the head, and the whole body. He was remarkable also for somnambulic and suggestional dreams of all the senses.

First Experiment.—The subject, being in somnambulism (polyideic state), counts from 1 to 50. His counting was to be interrupted by a mental order *from a distance*. Result : a few coincidences, but in most cases the paralysis came too soon—it preceded the mental order : consequently it had to be regarded as produced by ideoplasty.

Second Experiment.—I touch the nape of the neck with my finger, and mentally order him to arise and go sit on a bed. The subject rises partly, slips to the floor, sits down, bows, kneels. One of the company, B, an engineer, says it was he that mentally gave him the order to kneel. (Probably the slight downward pressure of my finger suggested to the subject the idea of sitting on the floor, and then the lowliness of his position produced in his mind the image of an attitude lowly *par excellence* and more convenient—that of kneeling ; while at the same time, and through a like association, B got the idea of ordering that posture).

Third Experiment.—No touch and no gesture. The whole company think on making him *raise the right leg*.

He remains motionless, but says he wishes to *dance*. (The resemblance does not suffice to justify a conclusion.)

Fourth Experiment.—I alone give the mental order. I do not touch the subject, but I use gestures, and direct my looks toward the member in question. The subject is blindfolded. I stand in front of him at distances of 2, 3, 4 and 6 paces, respectively.

He performs various motions ; rises, walks to the right, to the left, forward, backward (he retreats slowly and with difficulty), kneels, sits. I order him to extend the right arm—and he raises the left, that being the only act in this experiment that failed ; at that time I was distant from the subject six paces. When repeated, *without gestures*, these experiments gave no positive result. Repeated with gestures,

but *without any special concentration of the will*, they gave nearly the same positive result as at first.

Fifth Experiment (a few days later).—The subject being in somnambulism, his eyes bandaged, his ears plugged, I stand in front of him at a distance of from thirteen to sixteen feet, and make gestures of attraction and repulsion.

For more than an hour all the tests of this fifth experiment were successful. The principal one was to determine whether the subject really had a sense of my presence. I therefore hid in remote corners, while I attracted him toward me. I took all possible care to make no noise. I changed my foot-gear ; another person imitated my tread. I tried to lead the subject astray by speech, etc.; he followed me everywhere and found me always. In coming toward me he *sniffed like a hunting dog* (of all the persons present I was the only smoker, and my clothing was impregnated by the odor of tobacco).

Result : the subject was guided :

1. By an exceptional sensibility of the whole surface of his body for motions of the air (gestures at a distance);

2. By an exceptional sensibility for warmth (he felt the warmth of my hand at a distance of thirty inches);

3. By an exaltation of the sense of smell ; but not at all by mental suggestion.

Sixth Experiment (some days afterward).—The sleep not perfect ; he partly recollects after awaking (this, perhaps, because of the emotions of the day). Attraction often lacking.

One of my pupils, P., deceives the subject, who confounds him with me. The movements ordered are executed badly. The subject improvises, giving his dreaming fancy a free rein. He performs movements that no one thought of, while having the appearance of being under an influence. General result strictly negative.

Here is another negative experiment, performed on an hysterical young woman of marked sensibility. (Hypnoscope showed paralysis, contracture, and total anæsthesia of the finger.) There were two magnetizers, Dr. B. and myself. We each touch her on the head with a finger, ordering her to seize some object. The only result is that she falls asleep, but after a peculiar fashion, for the left half of her body is in rapport with me, the right with Dr. B. She hears me only through the left ear, and Dr. B. only through the right. So, too, with regard to attraction. If I touch the right arm, she has no sensation ; it is the same if I touch her with any object, a stick, for instance. Looks have no effect, neither has purely mental suggestion.

Here are some experiments upon "willing."

We are in the Count D.'s *salon*. One of the ladies tells me how she several times has succeeded in suggesting to her friend one act or

another by placing her hands upon her shoulders. I make a few experiments which are successful, or nearly so. But in this sort of performances mental suggestion plays no part. Having studied the unconscious muscular movements that cause a table to tip, or a pendulum to sway, as explained by Chevreul, I knew what to think of these phenomena. These involuntary movements suffice to suggest directions to the subject, who is thinking of nothing and whose body is in unstable equilibrium. Sometimes he *divines* the rest, that is, even acts that cannot be indicated directly.

Yet one of these experiments surprised me. The Prince C. is *sitting* in an arm-chair—consequently is in a stable position. Two ladies kneel before him and form a circle by joining hands with him. The order is for him to *cross his legs and to dangle the right.* The order was carried out after a few minutes. In this case the explanation is complex. Involuntary movement of the legs is difficult when the subject is in a fixed position, with hands held, as in this instance. But first, just because of that position, the legs alone (and the head) were free, and hence it is not surprising that after some minutes of immobility he should have felt the need of moving his legs, and the only thing he could do, in view of the position ot the ladies, was to cross them. Then, if only to verify the experiment, the eyes of the ladies were sure to turn every moment to the right foot of the Prince, who more or less automatically directed his attention to that point. The direction of attention toward a given point of the body always produces a tendency to movement, and the only convenient movement was the one he performed.

I must add that before this he made several movements *of the head*, which were disregarded as "unimportant;" but had one of these movements been selected, we should not have waited for the others, but should have had the same right to claim a success.

During the same evening I made still another experiment simulating will-action at a distance. Having noticed the sensibility of the Countess D. (hypnoscopic experiment : heat, numbness), I stand facing her and fix my gaze upon her for two or three minutes ; then I move away, walking backward, and she follows me ; I quicken my pace, still backward, and despite the laughter of the company, and though she made some opposition, she is obliged to follow. This experiment, one now quite familiar through Donato's performances, seems to prove a physical action of the will and of the eye. That is not so, however. The fixing of the gaze, expectant attention, and emotion produce a sort of fascination that may be regarded as an *intermittent monoideism.* Without losing consciousness and will completely, the predisposed subject undergoes, from moment to moment, the inhibitory influence of *his own mind ;* he is not paralyzed, but is subject to the *visual suggestions* that dominate his will.

Another experience in "willing" tried by the two ladies with the Count P. as subject was unsuccessful, and yet he was a sensitive subject (hypnoscopic experiment: prickling, heaviness, anæsthesia). I drove a pin into his finger, which had been locally "insensibilized" without hypnotization. This proves that the success of this sort of experiments is not always in proportion to the sensibility of the subject. We shall see further on what are the precise relations between *hypnotism* and *Cumberlandism*. I modified these tests in experimenting upon other persons.

Mrs. Sch., robust, but anæmic, subject from time to time (under the influence of emotions) to cataleptoid hysteric fits (hypnoscopic experiment: anæsthesia, localized contracture), is, while in the standing posture, put in the state of fascination by fixing the gaze. Mental order: *To pull me by the beard.* She slowly raises her hand in the direction of my beard, but does not touch it.

Mrs. A., weak, thin, nervous, but in fair health (hypnoscopic experiment: no result). Mental order: *To embrace Mr. S.* She goes in the direction of that gentleman and says: "I am to embrace some one."

Miss R., lymphatic, but in perfectly good health, with little sensibility (hypnoscopic experiment: prickling, heaviness). Mental order (with touch of the hand on the occiput):

1. *To go to the piano.* After a couple of minutes' hesitation, "I must play," said she.

2. *To embrace Miss E.* After a minute's silence, she says: "I am to embrace some one. It is you, Marie. No; it is you, Edvige."

3. *To guess whether I am thinking of an affirmation or of a negation.* She exclaims almost immediately, "You are thinking yes." The contrary was the fact.

Barring the last experiment, which might be regarded as the result of a mere erroneous conjecture, all the rest seem to indicate a real action. But they were not performed under faultless conditions; the subjects were not blindfolded, and the rest of the company, being in the secret, may have influenced them by their attitude. At all events, I remember distinctly that my individual impression derived from these experiments was not decisive. The first two, though more surprising than the last, because of the nature of the injunctions, which could not be easily conjectured, were not carried out fully. The others, in giving which I touched the subject, left room for doubt, as is always the case when that method is employed; and, besides, the acts enjoined on the subject may have been selected under the influence of the *psychic atmosphere.* I remember, for instance, that in the first part of the evening on which the last three experiments were made, Miss R. was asked to play a piece on the piano and refused. Little wonder, then, that when later she had to execute a suggestion, the same act came to her mind.

Then, the number of acts from which a choice has to be made on such occasions is very small. Indeed, in a decorous company what is there for you to bid a young woman do but to go to the piano, to embrace her sister, or the like? And if the order is merely to seize some object or to go to a place indicated, the touch of the hand and its involuntary pressures guide the subject very well indeed. I mention these petty details to show how needful it is to be circumspect and attentive in researches of this kind.

It was about this time that, having acquired a certain acquaintance with hypnotism, I resolved to apply it to the treatment of diseases. The result was surprising, and I saw not only that the assertions of magnetizers might be true, but also that a rational and methodical application would probably lead to the establishment of facts more surprising still. To-day we are beginning to take steps in that direction, and certainly it is time that, having demoralized a number of hysteric subjects, we should restore them to health by the same process.

Being absorbed in therapeutic study, I had neglected the problem of mental suggestion as apparently of no practical value; and it was only by accident that I had occasion to observe a few more or less unexpected phenomena connected with it. For instance, one of my patients could always tell, as soon as I touched her, whether my impressions during the day had been pleasant or disagreeable. She suffered from a complicated disease, which I might be tempted to call chlorotic ganglionic neurosis, and had been for thirty years bed-ridden. She was excessively impressionable, yet was insensible to hypnotism and to metalloscopy (hypnoscopic experiment: no result). An interesting peculiarity was that my hand seemed to her always warm, even when it was of much lower temperature than her body. As my attitude toward her was always the same, I marveled not a little at this faculty of discerning my mental state. But there are a thousand ways of guessing such things, as from the expression of the face, or from the tone of the voice; and there is no need to suppose a direct transmission. True, she could also tell whether before coming to her I had touched any other patient; but she might have inferred that from certain signs of fatigue, or from my coming a little late; perhaps, too, she was aided by olfactory sensations.

Another patient showed a like gift with regard to the persons who were habitually about her. She was hysterical, very easily hypnotizable (hypnoscopic experiment: anæsthesia and contracture of the whole arm), and manifested this aptitude only at the moment of awaking, *i. e.*, in a state intermediate between somnambulism and the waking state. She would then say of her own accord: "Oh! how weary X is of his work!" "Why is Y so worried?" "To-day you have more

hope of curing me, and you are very much pleased. I thank you for that," etc. All this she would say before opening her eyes, and often without a single suggestive word being spoken. Was there a real transmission of states of mind? I did not think there was. The same people were always around her, and she knew them well enough to be able to make these prejudgments. But there were a few strange coincidences.

Finally, a third patient, a Frenchwoman, knowing not a word of Polish, made apt reply (in somnambulism) to an observation made in the latter tongue. There was no analogy between the words. But this thing did not occur again, all further experiments in mental suggestion having failed, so I set the occurrence down to the account of chance. This subject was easily hypnotizable (hypnoscopic experiment: heaviness, anæsthesia and contracture of the whole arm), and often, *in the waking state*, divined the complaint of a stranger by simply touching his hand.

Having heard of many feats of this sort, I decided myself to investigate, so I asked her what disease she found in me?

"None; you are never ill; a slight congestion when you work too hard, but otherwise your health is perfect."

That was the exact truth. As a second test, I took her to one of my patients, a woman whose complex malady, though it presented lesions clearly characterized, still was not easily recognizable from the appearance of the patient. She had formerly had an attack of pneumonia, and there was hepatization of the right lung, chronic inflammation of the larynx, dorsal hyperæsthesia, frequent headache, several defects of circulation, dyspepsia, and intermittent general debility. Despite all this, the patient, thanks to her exceptional constitution, looked well, and no one would, on first seeing her, suspect her case to be so serious.

The somnambule, after touching the patient's hand, named pretty nearly all her maladies. She did not describe the lesions in sufficient detail, but with regard to the symptoms her diagnosis was very accurate. And more accurate still was her capital description of the patient's character and of her bad habits.

"On what do you base your inferences?" I asked. "Do you think that you see the organs that are affected?"

"No," she said; "rather I myself *feel* the symptoms of the disease."

And, in truth, I have seen her suffer and for a moment present certain morbid phenomena of another patient that she examined, but whom I did not know.

Her feeling the symptoms might be explained by *ideoplasty*, but even so, she would have to know them. And here it is that doubt begins. The somnambule did know the symptoms. But she was a very well-informed midwife, possessing a certain amount of medical knowledge

and a good deal of experience : hence she might well have had other guidance than that of a mystic faculty. After all, one or two experiments are not enough. On the other hand, however, I must admit that the somnambule then saw my patient for the first time ; that during the whole consultation she kept her eyes half-shut, and did not attempt to examine the patient according to any of the ordinary methods. As for the influence of the imagination in feeling the symptoms, that explanation becomes doubtful from the fact that the somnambule was not *suggestionable* at all, whether in the waking state or in somnambulism. She passed rapidly out of the aideic state into *active polyideism*, the latter resembling the waking state in all respects, save that it presented anæsthesia of the limbs.

I may cite, in connection with the fact here observed, a passage from the report read before the Paris Academy of Medicine, in 1831, by Husson : "We have found a somnambule that told us all the symptoms of the illness of three persons."

Was the case I have described one of mental suggestion ? I alone could know the condition of my patient ; the somnambule may have read it in my mind.

This hypothesis did not to me seem admissible, for the reason that no voluntary suggestion had been successful ; besides, it is better to hold to an explanation of a less extraordinary character—*a transmission of the symptoms of a disease.*

Is *that* possible ? I know not. I do not think we can hold with certitude the existence of a faculty whereby we directly *feel* all the peculiarities of another's pathological state ; and yet, a Paris physician has assured me that not only does he possess that faculty, but that he never needs any other means of diagnosis.

All that I can testify from my own experience is, that there exists another sort of nervic transmission, more general and less "circumstantiated ;"[1] and this, too, for a long time seemed to me untenable and absurd.

It is a popular belief of very ancient standing, that one may *give the pain* he suffers to another person, or even to an animal. Many a case of this kind have I heard of, and many a one more is mentioned in the writings of magnetizers and of a few physicians, but I will tell only of what I myself have seen and experienced. Here are the conclusions I have reached in my own practice :

1. The act of magnetizing, even when it is restricted to imposition of the hands, is much more exhausting than an act mechanically analogous.

2. This exhaustion is more marked when one magnetizes a sick person than when one magnetizes one who is sound.

3. This nervous exhaustion, which manifests itself by certain

[1] *Circonstanciée.*

special characters, is sometimes accompanied by a transmission of pain.

4. The kinds of pain that are most likely to produce this phenomenon are the "fulgurant" pains of the ataxic, rheumatic pains, and dorsal hyperæsthesia.

5. Prolonged contact facilitates this phenomenon, which, though more rarely, is manifested also as a sequel of magnetization without contact.

6. The transmission is rarely definite and immediate. Sometimes, not often, the pain visits the same part of the body, and this occurs particularly when one has to do with several patients, all presenting the same symptoms. But, as a general rule, it attacks the *nodi minoris resistentiæ*, and manifests itself mostly the following morning at awaking.

7. Transmitted pains are always much lighter and of short duration.

8. Besides pains, certain pathological *states*, as congestions, cold in the head, insomnia, etc., may also be transmitted as a consequence of a magnetization. They are easily distinguished from an indisposition of spontaneous origin in the magnetizer himself, by their sudden appearance and disappearance, as also by their superficial character, so to speak. They do not bring with them the other consequences that belong to spontaneous pathological states.

9. The phenomenon is always accompanied by a notable relief to the patient whose disease condition is communicated. One might say that *the nervic equilibrium is established at the expense of another organism that is more in equilibrium.*

Hence, holding as I do that there is a more or less general transmission from the patient to the magnetizer, I cannot deny the possibility of a more explicit and more detailed transmission from the patient to a hypnotizable subject or one made hyperæsthesic by the methods of artificial somnambulism.

Two bodies of unequal temperature tend to equalize their temperature. Two bodies unequally electrized tend to equalize their electricity. Two bodies unequally equilibrated in their nerve functions tend to equilibrate those functions.

Comparison is not demonstration ; yet it brings out an analogy, and that helps our ignorance a little.

And as for thought, does not that correspond also to a nerve state? Undoubtedly ; nor have I ever denied the theoretic possibility of transmitting a psychic state, any more than I can deny the theoretic possibility of transmitting the human voice across the ocean—more particularly since a certain lesson in circumspectness I once got myself. In October, 1884, I was still fixed in the belief that, because of the radical antagonism existing in the microphone between the sensibility of its constituent parts and distinctness of utterance, we should

never succeed in reproducing speech in a loud voice ; and I held that a multitude of facts and strictly logical arguments justified that conclusion ; yet in October, 1885, I myself invented the *thermomicrophone*, which reproduces speech in a loud voice. So, then, let us repeat the wise remark of Arago, quoted at the beginning of this work, and proceed with our investigation.

Coming to Paris in 1882, I naturally visited everywhere, wherever anything relating to hypnotism was to be seen. One day I witnessed some hypnotic experiments at the house of a physician. After exhibiting all the wonderful feats of an hysterical young woman, duly trained, the physician gave me a surprise in the shape of an exhibition of mental suggestion. The experiment was made in this wise :

The somnambule having received the (verbal) order to go to the end of the room, she went thither, her eyes half shut, with the air of a school-boy that knows his lesson perfectly, then stood still, facing us. Then the doctor fixing on the subject a look of stern command, "mentally" ordered her to come back toward us (we were standing beside her bed). After a few moments of hesitation and impatience, the subject came back to us. The doctor turned to me with a smile of triumph, as though he were to say, "Isn't that astounding?" But the only thing that astonished me in the matter was the honesty of the experimenter, content with so little.

If when he questioned the subject whether she felt any sensation whatever in the legs, and she answered that she did, indeed, feel something, he took that as proof that this something was the result of "mental suggestion." Of course, these experiments could serve only to make me more incredulous.

With regard to "demonstrative" experiments, repeated for the benefit of the curious, I must here lay down a general rule that will, perhaps, seem over-rigorous :

One same experiment in mental suggestion, repeated under the same external circumstances, has no scientific value. When first made, it may possess the value of an isolated fact, but it possesses that value no longer when it is made a second time in the same way, and under the same conditions. Here is an example to show what I mean :

A curved finger may signify many things, or nothing at all. But if you make a somnambule in the state of suggestionable hypnotism believe that a parrot is perched on that curved finger, the next time you have only to hold the curved finger out toward the subject in the same way in order to make her at once see the parrot perched upon it.

This phenomenon is possible in the polyideic state : it is inevitable in monoideism, for then control is out of the question, and the subject does not think, cannot conceive but one single idea, and that idea you

inculcate directly or indirectly. In the case under consideration it is the inseparable *association* that completes the direct sensation.

Suppose the somnambule that comes back to where the doctor and I are standing, was, in the first instance, moved simply by impatience and a wish to return to her couch; or suppose that there was some sort of real action: these alternative suppositions are of no account when the experiment comes to be repeated another day under the same conditions. There is already formed a more or less invincible association between the thought of being at the lower end of the room, the stern look of the doctor, the expectancy expressed by the faces of the lookers-on, and the intention to go to them.

This remark upon the importance of association by contiguity first, and afterward by habit, is very simple, yet it is too often lost sight of. I have, indeed, been astonished to see it disregarded by distinguished physiologists who have not the knack of psychological observation. So general is this disregard that it is become the sole cause of a multitude of entirely erroneous generalizations, which nevertheless are accepted in hypnology as principles.

For example, there is absolutely no essential relation between "open eyes" and catalepsy. Catalepsy can be produced with the eyes of the subject open, or half shut, or entirely closed, or in perfect darkness. But catalepsy may be induced by any sudden, lively impression that takes the subject by surprise. Suppose the subject on lifting his eyes is met by a bright flash of light, contrived beforehand by the "impressioner." He suffers the nerve-shock of this impression and instantly falls into the hypnotic state of catalepsy, and has not time even to close the eyes. That is enough; there is formed an ideorganic[1] association between a sudden opening of the eyelids and the organic state of catalepsy. The brain being momentarily paralyzed, other ideas there are none, and consequently they cannot interfere with the forming of this association.

Lower the eyelids and the limbs grow relaxed: by suppressing the first term of the association you cause the other to disappear. If on the strength of this experiment you announce as an axiom that "catalepsy is produced by opening the eyes," or that "the subject in catalepsy keeps the eyes wide open," you make a statement that has no more value than if you were to say that "in catalepsy the subject keeps the eyes always closed," on the strength of another individual habit as easily producible.

To verify the cataleptic state the usual way is to raise the arm of the subject: if it falls, he is no longer cataleptic, else the arm would have retained the position you gave it.

Once I tried to produce catalepsy by a mental order, after ascer-

[1] Ideorganic (idea -|- organ) association; an association between a thought in the mind and the action of a bodily organ.—*Translator.*

taining that the muscles were perfectly lax. Catalepsy appeared: the arm stood out from the trunk. I removed the catalepsy, to begin again; the arm fell. I mentally ordered the catalepsy to return; again it appeared; and so on. Had I any ground to infer that there was real mental action in this case? Not at all! Here is the true explanation of the phenomenon:

When experimenting for the first time upon the subject in question, I had produced catalepsy in the arm by lifting it with one hand while with the other hand I made a few passes (gentle massage) from above downward. It took several minutes to produce the lightness and mechanical flexibility of the member which constitute catalepsy.[1] But by repeating often I reached this result much more speedily; one pass along the arm was enough.

After this experiment I concluded that not even the one pass was necessary; there had been formed an ideorganic association between the act of lifting the arm and the cataleptic state. The one called forth the other; hence my mental suggestion played no part, and *I produced the catalepsy while trying to find out whether it existed.*

But, you will say, the same movement of the arm a moment ago showed a complete relaxation of the muscles; how, then, is it that the same movement suggests at one time simple paralysis (lethargy), and at another time the cataleptic state?

The reason is that the movement *is not the same.* We lift the arm in one way to make it fall, and in another way when we wish to see if it will not stand rigid. A slight difference in our state of mind suffices to give to our muscles and to our fingers a difference of motion and of touch that in hypnotism is quite sufficient to reproduce the organic association of catalepsy in one case, and not to reproduce it in another.

Our touch is of one kind when it is entirely without purpose, it is another thing when we *wish* to produce an effect; of one kind when we *have no belief* in its efficacy, of another when we have unlimited confidence. "Will and believe"—but you will then find phenomena that do not exist.

The unconscious, as I have said, is the great præstigiator in hypnotism, and many a trick it plays upon us. But, I must add, it rarely does so dishonestly. It is, on the other hand, perfectly docile, and never was animal more easily trained than it is. The misfortune is that we train it all unconsciously and without appearing to do so.

Then it is that the unconscious of each of us disports itself in playing tricks on each other one—and upon ourselves.

In the two instances just cited, I postulate *a really active intermediary*—a bright flash of light and a gentle massage—but these are not essential; the unconscious can divine your thoughts without them,

[1] *Cette légèreté et flexibilité mécanique du membre qui constitue la catalepsie.*

provided you remain steadfast in your wish. You lift the subject's arm, and it falls ; try again, and the subject will perhaps hesitate, and the arm will drop to his side less quickly ; keep on, and probably the unconscious will say to itself : "Evidently they want me to maintain the posture they give to the arm. I am willing." And you will get your "cataleptic state" without any accessory manipulation.

It is in this way that certain magnetizers have found a number of "polarities" in the human body. I have seen their experiments, which are quite convincing : the thumb attracts, the little finger repels, and so on. The unconscious having learned its lesson, no longer contradicts itself. Yet, if you use a little entreaty—albeit, without any words—you will easily obtain the opposite result, and you will get any polarity whatsoever, according to whatever fanciful plan you may lay out in advance. Three seances are enough *to produce a habit of re-action.*

(Of course, these remarks do not settle the question of polarity in general. Upon that question I do not mean even to touch. I merely say that it is possible to inculcate into the subject an imaginary polarity.)

Even when you experiment without contact, even when you act upon a sleeping person, *who, however, has already been magnetized by you*, you must be on your guard against unconscious habitudes.

The possibility of producing somnambulism in a person that is in natural sleep, and who has no suspicion of your presence, is often cited as proof of *fluidic action*, or mental action at a distance. But in most cases this, too, is an illusion, and when the experiment is successful, proves one thing only, to wit, *the force of ideorganic associations.*

You have the habit—perhaps quite unconscious—of disturbing the air in front of the subject's face, when you make passes in a peculiar way of your own. The subject, or rather his unconscious, divines your presence, feels you are there, obeys you ; the association of these impressions with the organic state of somnambulism produces the somnambulic state. Try some *new* method—one that would have been equally effectual in the waking state, because of the conscious suggestion—and *you will obtain no result.*

In purposely employing the principle of association, we come upon curious applications of it. You choose whatever link of association you please, and connect that with one, two, three, four or more similar links, be they ideas, sensations, acts, states or whatever you will. It is not necessary that there be any logical relation at all between the first link and the ones that follow.

I once had as a patient an insane woman, fully bent upon suicide, but who always very carefully planned in advance the carrying out of her projects. In the normal state she never would tell me about them, and by degrees she became mistrustful even in somnambulism. The

monoideic state, which is always characterized by absolute submission, it was almost impossible to produce, and the most trivial question made her pass straight from the *aideic* state to *active polyideism*, in which she regained her independence. Still it was necessary to learn her secret in order to prevent mischief. To this end I contrived the following ruse. Having been in the habit of sitting on the right whenever I talked with her, one day I sat to the left of her, and taking advantage of a favorable moment—a sort of visional delirium akin to monoideism—I changed my voice slightly, and made answer to her raving, taking care to be agreeable to her. The conversation went on, and I saw that she did not recognize me, though now she was fully in the state of active somnambulism. She began to unbosom herself to me, and soon she confided to me her inmost thoughts.

"But who are you?" she suddenly asked, "and what right have you to question me?"

"Oh, you know me well. I am your old friend and devoted confidant for whom you have no secrets. How, have you forgotten Mr. Camille, your good Mr. Camille?"

"That's a funny name," said she, "but no matter."

Thenceforth *I had only to station myself on her left* in order to possess her confidence. There I was called Mr. Camille, while on her right I was still her "doctor." The thing was understood and there was no longer any need for me to change my voice or my position in any respect. I was transformed; but at the same time she also underwent a transformation, and she was no longer the mistrustful, circumspect person she was before. (She was saved from suicide thrice by this ruse.)

Suppose now that I had wished to give a deceptive demonstration of the force of a complex mental suggestion—changing my personality in the mind of the subject, without a gesture, without a word; changing my name; changing her attitude, her feeling toward me; "mentally" ordering her to confide in me.

To perform that marvel, all I should need to do would be to stand on the left of her.

Well, these things happen involuntarily through ignorance of the mysteries of association. We believe ourselves to be candid observers, the while we are unconsciously suggesting the phenomenon that is to be verified. Thus it is that the somnambulic subjects of the "fluidist" magnetizer see the fluid emanating from his finger-tips, while the somnambules of the hypnotizer see nothing, and those of the spiritist discover spirits everywhere, the same being invisible for the somnambules of the materialist. So it is, once more, that "pressure on the top of the head" produces, at Paris, the "somnambulic;" at Breslau, the "lethargic" state; at Manchester, "religious ecstasy," and so on. It is all "the story of Mr. Camille!"

Robert-Houdin long ago contrived a means of imitating "second sight." He trained his assistant—who played the part of the medium—so readily to understand his questions, that the latter always "saw" from a distance objects held in the hand, even when the hand was closed. If the question was "What do you see?" it was a coin. The question "What do you see *now*?" indicated a gold coin, and so on. Robert-Houdin could even convey to his subject, "mentally," the number of a bank-note simply by means of questions, the secret import of which was understood between them.

One often imitates this trick unconsciously when one, in thinking of a given phenomenon, has the habit of questioning the subject always after the same fashion.

Sometimes habit even is unnecessary, and one succeeds *ex tempore*, even in the waking state. I have often made the following experiment:

I lay a walking-stick on the ground, and say to a person that is hypnotizable, though not hypnotized: "Pass this limit if you please." The subject does so. "Once again!" He steps over the cane hesitatingly, and looks at me with mistrust. "And again!" He stands stock-still quite unable to step over the cane; his legs refuse to carry him.

Did I say that this was going to happen? No! Did I make any gesture whatever? No! I simply *willed* and *believed*. Then it is a case of mental suggestion? By no means—only *a suggestion guessed*.

Cumberland, the famous "mind-reader," came to Paris in 1884. It will be readily understood that, after having made the experiments already described, I could not be under any illusions with regard to the apparent thought-transference exhibited by him. Mental suggestion has nothing to do with his performances, but it is interesting and highly instructive to read the first reports of the newspapers. There we may see the difference between the experiments as performed, and as described, even when the performances are described by scientific chroniclers. There, too, we learn how small is the value of testimony when there is a question of a new and unknown phenomenon.

Having clearly perceived that the true medium in these performances was he who "thought," not he who guessed, I repeated Cumberland's experiments, and I published a series of articles on the subject in the *Gazeta Polska* ("Polish Gazette"), in May, 1884. Since that time the matter has been sufficiently elucidated in France, by the researches of Messrs. Gley and Ch. Richet, and I have only to formulate my own observations in order to complete theirs, without recounting the experiments in detail.

It is certain, then, that every thought having any relation whatever to space tends to produce unconscious movements indicating such relations. That is a habit, a nerve mechanism, in part hereditary, in

part acquired. In the case of an object hidden (to be found by the "mind-reader"), or of a person chosen (whom the mind-reader is to point out), one is thinking of the place where the object or the person is, and one simply *leads* the mind-reader who holds one's hand. One needs only to practice for one evening to perform the feats of the famous mind-reader; for notwithstanding all the extravagant stories that have been published about the matter, it does not even involve any special fineness of touch, no nice perception of pulse-changes or of imperceptible vibrations. *One must be able to go whither one is led;* that is all. The comic side of the thing is that one has not the slightest suspicion of what one is doing, and that people pay twenty francs to see a person point out an object they themselves have hidden. The melancholy side, on the other hand, is that our contempt for the "occult sciences" has rendered us ignorant of highly remarkable and highly instructive physiological phenomena, to that degree that we stupidly cry "Fraud!" when some simple, common fact is shown to us that ought long ago to have been studied and ascertained.

It has been necessary for a bold professional to traverse all Europe, playing tricks upon diplomats and princes of blood royal, in order to make science take account of the relations between "the physical and the moral." And it was the same with hypnotism, which would to this day not have been recognized by science had it not been for the public exhibitions given by Donato and Hansen.

In these experiments the one who leads you knows not what he is doing, the while thinking himself quite master of himself. I have known a very intelligent and highly educated lady with whom I could find a needle in a haystack. She would lead me with such certainty and with such force that resistance was out of the question. Once a little note was hid under a flowerpot. She indicated to me the flowerpot, and I began to feel about within it; then, with her hand, which I held loosely in my own, she made a negative gesture perfectly intelligible, and then another which said: Underneath!

Now, that lady not only was entirely unconscious of this expressive conversation, but she never would believe that it was by her unconscious motions that I was guided in the search.

"No," she would say, "that is impossible. You read my thought; I was very careful this time not to make any motion whatever." She was a person easily hypnotizable (hypnoscopic experiment: heaviness, paralysis, numbness).

There are some 60 persons in 100 with whom Cumberlandism succeeds more or less readily; thus, they are more numerous than hypnotizable subjects, who are not more than 30 in 100.

Usually the experiments are more successful with hypnotizable

persons. Nevertheless, there is a certain number of the latter—even of the best subjects—with whom you never will succeed. Why? Because the conditions of success in Cumberlandism are twofold:

1. An organic tendency to a duplication between the voluntary and the involuntary movements, which characterizes the majority of hypnotizable subjects.

2. A facility in concentrating one's thoughts and keeping up the concentration, which quite naturally and of necessity produces in every one this duplication.

Now, among non-hypnotizable persons there are some who possess this latter faculty in a high degree, while, on the other hand, it is sometimes lacking in persons easily hypnotizable, but who cannot concentrate their attention. When they pass fornent a person, they think of that person; but when they perceive a mirror they think of the mirror, and plainly the muscular indications become confused. Yes; there are persons easily hypnotizable who are incapable of concentrating their attention—a thing, be it said in passing, which contradicts Braid's theory.

In general, Cumberlandism rests upon the same physiological basis as "willing," though the external conditions are altogether different. In "willing" it is by the will that we seek to make the person we touch perform a given movement, and then we involuntarily impel him to its performance. In Cumberlandism, on the contrary, we have no such will, we simply think of a place—but we lead the subject all the same. At bottom the same principle is found in both; an *ideoplasty of movements* (realization[1] of the movements we think about) and, from the point of view of the one who guesses, a *mechanical suggestion.*

It is still a long way to mental suggestion. Yet these are the experiments that have contributed most to awaken in the minds of some physiologists the thought of studying true mental suggestion.

CHAPTER II.

PROBABLE MENTAL SUGGESTION.

SUCH were my judgments, such my doubts, when, in the month of March, 1884, I received from a well-known physician of Nice a letter, in which occurred the following passage:

"To-day I met a young man of 24 years, intelligent and educated, who wishes to be of service to science, and in whom can be produced, *in the waking state*, suggestion phenomena by word and *by thought.*

[1] Or actualization.—*Translator.*

He is a noctambule from childhood ; so have been or are his mother, his maternal grandfather, and his maternal uncle. I have been able to make a few experiments with him. I imagined seeing a bird flying hither and thither in a room : I touched him and he saw the bird flying about in every direction. [Here follows an experiment in color-changes by *verbal* suggestion, which does not concern us.] He appears to be a little more sensitive on the left side of the body [than on the right]. I must see this subject again, for he is a very remarkable one.

[Signed] A. Barety."

As the details of the experiment were not stated with precision, I was justified in supposing that the *questions* of the experimenter, and his *attitude*, might have suggested to the subject the hallucination desired. In fact, to suggest to the subject the idea of a bird flying, one need but look round the ceiling and ask if he does not see something in the air. And had details of what he saw been asked for, it is probable that the bird seen by the subject would be found very different from that imagined by the experimenter. Some weeks later I received a second letter, containing more details :

"Since my last letter was written, I have seen again the subject of whom I have spoken to you. He is in the hands of a magnetizer, with whom he came to see me. I have on my desk two statuettes, one bronze, the other ivory ; these I placed side by side, three or four inches apart, and upright. Then I said to the subject : 'Look at these two statuettes ; what is their color ?' He answered : 'One is white (that on the right) and the other is dark.' Then placing my left hand in his right, I asked if he saw anything peculiar in looking at the two statuettes. As for me, I had *imagined* or strongly conceived the thought of the white one *quitting its place and becoming one with the brown.* He answered, after a few minutes, that the white statuette *left its place ;* that it transferred itself *to the other side* of the brown. That was a little more than I had thought.

"Next I imagined (always without making the slightest sign) the statuettes *growing smaller*, and (my right hand being placed in the right hand of the subject) I asked him what he saw. He answered that he saw the statuettes growing smaller and smaller, till they were no bigger than a pin-head. In reality, they are each about five inches in height.

"Then I thought of them growing larger, and, *without my questioning him*, he told me that now he saw them growing larger and larger. He even lifted his head to follow this increase in their size, and seemed quite surprised at it. Imaging to myself, then, the statuettes growing smaller till they resumed their proper dimensions, I was told by the subject that he saw them growing smaller."

Here I interrupt the quotation to make some remarks. This experiment is certainly a good deal more important than the previous one. But it is far from being conclusive. First, the thoughts of the subject were fixed in advance, and limited to "something" about to happen to the statuettes. What could happen to them ? A change of color ?

Experiments on color changes had already been made in the preceding seance. The statuettes might change their places. The subject had this thought, but was a little "out" as to details. They might grow bigger. This the subject guessed. What association comes nearest to increased size? Diminution. This, too, the subject guessed. After the reality is falsified in two opposite respects; one, as a matter of course, feels the need of restoring the true state of things as they appear to our senses, and it is probable that the experimenter and the subject had this thought simultaneously. We need to know not only the details of the experiment—which has been described carefully—but also the conversation that went before, and all the conditions of the moment, in order to be sure that a train of associations and the *psychic atmosphere* were not the sole cause of the successful issue.

Such, in substance, were the observations that I made to the experimenter, and he was pleased to recognize the pertinency of a certain number of my objections. We may now return to the letter:

"After this experiment (writes Dr. Baréty), I made another and very interesting one on making him *find a hidden object.*

"Having made him *turn his head away entirely*, I took the ivory statuette and concealed it in my right hand, which I placed upon my hip. My left hand was not at this time in contact with his hand as it was before.

"I asked him to face about and look at the statuettes, which he immediately did. But, as he showed no surprise, I asked if he saw them both. He answered yes. Then, I said, 'Well, then, take the white one in your hand' He put his hand forth to where the ivory statuette had stood before, and seemed to bring it toward him and to examine it. But presently he moved his fingers as though conscious that he was grasping only a shadow, or that the object was vanishing. 'Where is it? What is become of it?' Forthwith he directed his eyes toward my closed right hand, placed on my hip (a position in which I had held that hand before seizing the object), and said to me, 'What have you in your right hand?'"

So far, I still see nothing but a transient hallucination, and an inference that easily enough may have been suggested by the immobility of the experimenter's closed right hand, which the subject, perhaps, for the first time noticed at the moment of his search. But let us return to the letter.

"I then asked him to turn and look in the opposite direction [an insufficient precaution, for it gives assurance to the subject that nothing is taken to any distance away], and then rapidly and noiselessly I hid the statuette in my waistcoat. Then I again placed my closed hand upon my hip as before. I bid him turn round and tell me quickly where the white statuette was, and to get it. He thereupon made his right hand perform a most singular movement. First he carried his hand to the spot where the statuette had originally stood, then, always slowly, he guided it toward the waistcoat, passing nigh to the hip

(where I had before held the statuette concealed in my hand), and following the track of the statuette.

"In conclusion, I repeated the experiment of increasing and diminishing the size of the statuettes *without my hand being in contact with the subject's, at the same time concealing my eyes.* It was a complete success. This last experiment seems to me very convincing. What think you of it?"

Yes; more convincing than the first, but unfortunately it was the *second*, repeated under the same conditions; consequently it is open to the doubts formulated above with regard to repeated experiments in general.

But while I raised these objections I was deeply interested in Dr. Baréty's experiments, and I sent to him a great many questions which I asked him to resolve experimentally. As for the experiments in finding a hidden object, when the subject followed exactly the track of the object itself, I frankly told the doctor that I did not understand them at all.

What was needed was a more systematic, a more rigorous, study of the matter. This Dr. Baréty knew as well as I, but unfortunately circumstances were adverse. Then, too, perhaps it was an excess of incredulity; but when there is question of an experiment in mental suggestion, I put no trust in anybody but myself. Besides, have I not told of a case in which I was myself deceived by an unnoticed circumstance or an unsuspected psychic mechanism? Nor is it out of presumption that I depreciate the testimony of others, who perhaps have taken precisely the same precautions I would myself have taken; but in matters like this it is impossible to recount all the little details that are essential for a full understanding of the situation, and conviction does not flow from the final result nor from the general conditions; what produces conviction is certain peculiar circumstances, the impression on the observer's mind, his personal sense of the impossibility of explaining the thing otherwise than by a direct psychic action.

I was therefore very glad to learn a month afterward that the subject and his magnetizer were about to come to Paris. I gave a good deal of time and study to planning experiments, and a seance was held in accordance with a programme drawn up jointly by Dr. Baréty and myself.

I commenced with the *hypnoscopic experiment.* It showed the subject to be a person of enormous sensibility: there was contracture and almost instantaneous insensibility of the whole arm. And this phenomenon could be produced or suppressed purely by verbal suggestion.

I wished at first to leave his habitual magnetizer, Mr. R., entirely at liberty, reserving to myself the right to make the experiments again

under different conditions. When one seeks to verify a phenomenon about which he knows nothing, one must not impose upon it at first a lot of conditions that may interfere with success, and yet, for all that, may not disprove the principle one is investigating, and the true nature of which one does not know.

"What results do you think you can produce with your subject?" I asked the magnetizer. He recited a whole litany of phenomena, out of which I selected the following three: 1.—Sympathic and attractive action on the right side, antipathic and repellant action on the left. 2.—Paralysis produced from a distance. 3.—Finding hidden objects.

"Do you think you can obtain with your subject any direct transmission by means of your thought alone?"

Much to my astonishment, the magnetizer replied in the negative. Yet that was the object of our meeting!

"I must use gestures," he said, "except in the third experiment, which can be performed without my taking any part in it. But I cannot guarantee thought-action pure and simple: with regard to that I am not at all sure."

What matters it? We will make the attempt all the same, as Dr. Baréty thinks he has succeeded often.

I shall not need to recount the details of the first experiment. Evidently—and R. himself shared in this opinion—it was simply the result of hypnotic training. It is "the story of Mr. Camille" once more, and it does not even prove the independence of the two cerebral hemispheres.

Second Experiment.—The subject turns his back to the magnetizer, who is in another room at the distance of about 25 feet. Dr. Baréty stays with the subject, I watch the magnetizer. The subject is counting aloud. At a signal from me the magnetizer "projects the fluid" with all his might. The subject ceases to count—he is paralyzed.

This experiment succeeded three times consecutively. I thought I noticed, however, that the magnetizer's cuffs were too noisy.

I now remained in the room. I walked up and down to prevent the subject from hearing the magnetizer's gestures. The experiment was a flash in the pan, that is to say, there was a delay of several numbers.

As the magnetizer was acting in perfect good faith, I asked him to take off his cuffs. Check again. We began once more, and now, though the magnetizer, at my request, made his gestures as noiselessly as possible, *the experiment was successful.*

Conclusion: Direct action was not proved, but no more was it disproved. But if direct action is to be admitted, there was reason to believe that the auditive impressions *assisted* in producing the phenomenon.

Third experiment.—This time something really new was presented. The procedure was as follows:

In the first place, every precaution was taken to avoid illusions.

An object of any sort was chosen—a book, for instance—which was placed on a table. (In this experiment the selection of the object is not important.)

The subject and his magnetizer being absent, I take this book in a direction chosen by myself, and hide it in a nook in the room not easily guessed. (I make an accurate sketch of the route taken by me in removing the book.) Baréty and I know where the book lies, but we take such positions in the room as to prevent our influencing the subject by any involuntary sign.

The subject is brought in blindfolded. The place on the table where the object formerly lay is indicated to him, but without naming to him the object. The subject is not asleep, but it becomes plain, as the experiment proceeds, that the concentration of his attention produces in him a state of super-excitation that is almost hypnotic. He begins by feeling of the spot indicated. He knows not what the object is, does not guess what it is, yet, strange to say, his fingers as they grope describe the contour of a book. One might say that the ghost of the book offers a resistance to his fingers. Having made sure of the form of the object and of the place it occupied before, he essays two or three directions, always *groping in the air*, and takes the true one. This he follows slowly, misses it twice or thrice, retraces his steps, goes on with greater confidence, and in three minutes finds the book. We say nothing, but he assures us that this is the object we had hidden.

I made a sketch of the path he took. On comparing the two lines, the second is found to be a little more curved.

In another experiment I purposely made two unexpected declinations; the track of the subject was straighter than mine.

Here, again, is something extraordinary: I selected as the object to be hidden a powerful magnet (the hypnoscope), without letting the subject know. He comes in, feels of the place where the magnet had lain, and stands motionless. "I cannot go on," he said; "my fingers are become stiff." In truth, there was a contracture not only of the fingers, but of the whole forearm. I was much surprised, but by means of gentle massage, without uttering a word, I freed him from the contracture and induced him to proceed. On reaching the mantelshelf, on which was the magnet, hid in a vase, the same phenomenon was seen. "It is there," he said, "but again my arms are stiff." He showed great fatigue at the conclusion of each experiment.

I shall now be asked, What is the solution of the enigma? All that I can say is:

1. All the experiments were successful, or nearly so.

2. There was no mental suggestion, or if there was, it played a secondary part.

3. The principal rôle was played by the subject's *tactile sensations*, which were exceedingly acute.

4. The object chosen might be "magnetized" or not, and taken to the hiding-place by an unknown person, and consequently neither the individual "fluid" nor certain olfactive emanations come here into play, or at least they are not necessary.

5. Unless we admit mental suggestion or the reality of a "dynamic ghost" (*spectre dynamique*) left at the place where before the hypnoscope lay, it must be confessed that in this case no scientific explanation whatever is possible.

6. Between the transfer of the object and the performance of the experiment it was essential that only a few minutes should intervene; else the "trace" of the object through the air vanished.

I may mention a few additional points of interest:

When questioned with regard to his own sensations or opinions, the subject told me that he considered the phenomenon as the effect of a *special tactile sensibility acquired by practice*. "When you are in a bath," said he, "you feel distinctly the difference in density of the two media, water and air. The water offers a greater resistance to your movements than does the air. Now, I have very much the same sensation in the air that an object has traversed; it is for me *more rarefied, it offers me less resistance*, and it is this less resistance mainly that guides me. I cannot tell you anything more about it. I do not feel quite master of myself in making this experiment, and the certainty of success depends precisely upon the degree of this peculiar state. I then feel *isolated* from all around me, I hear nothing, I exist only in my fingers, which, however, work without me. The more I reason the less do I succeed."

As for the experiment with the hypnoscope, evidently we must suppose that the presence of the instrument *magnetizes* the air for a certain time, or at least produces an electric change that we are unable to define. This supposition accords with Reichenbach's researches, which perhaps are worth repeating in spite of the non-success of the experiments mentioned in the beginning of the present study.

We decided to make a further test of the direct action of thought upon the subject. Touching him with my hand, I imagined to myself some object—its shape, color, feel. In this case the subject either saw nothing at all, or something very indefinite.

Setting before us a leaf of white paper, I imagined to myself a round yellow spot. The subject saw something gray. Again I imagined a black cross; he saw a round spot.

It appears that Dr. Baréty was more fortunate than I, and that with him the subject twice or thrice guessed the color that the doctor

had in mind, or at least the complementary color. But there was nothing decisive in these experiments—such, at all events, was my personal impression.

The following year (1885) Charles Richet published his remarkable essay in Ribot's *Revue Philosophique.*

He was inspired by an idea that I find to be at once simple and ingenious, and which may, I think, be stated as follows:

There are in physiological phenomena, no absolute limits—only a gradation. Consequently, if mental suggestion exists in an exceptional degree in some privileged subjects—and that remains to be proved—it must needs exist in a degree more or less inappreciable in everybody. That which in an isolated fact is inappreciable may be rendered appreciable by bringing isolated facts together. Statistic may light up an effect previously not noticed, and the calculus of probability readily shows how much belongs to chance and how much to a real agent. Thus one can find a rational, a premonitory (excuse the term !)[1] basis, before he attains direct proof of an extraordinary fact.

Mr. Richet set about making experiments (easily repeated with everybody) and grouping them, and reached the interesting conclusion that in cases where mental suggestion possibly was added to chance, there was always a slight surplus of successes. Here is a summary of the results obtained:

		Successes.	
		Probable.	Actual.
1.	In 1833 experiments with playing-cards	458	510
2.	" 218 " " photographs, etc.	42	67
3.	" 98 " " a rod	18	44
4.	" 124 spiritist experiments, so-called	3	17
	2,273	521	638

That is to say, in all these experiments there was a surplus in favor of suggestion.

I have repeated the experiments with playing-cards with four non-hypnotizable persons, and found the results very much the same. In order to be able to compare them, we must observe that for Richet's 1833 experiments the calculated probability was 0.250, and the actual proportion 0.278—a surplus of 0.028 in favor of mental suggestion. Now here are my figures:

		Successes.		Proportion of
		Probable.	Actual.	Actual.
C. R.	92 experiments	23	22	0.239
M. K.	30 "	7	7	0.250
B. A.	50 "	12	15	0.300
M. A.	107 "	26	32	0.299
J. O.	49 "	12	16	0.329
	328	80	92	0.283

[1] *Prémonitoire.* The meaning is obvious. The author it is that begs the reader's indulgence for using the word.—*Translator.*

That is to say, the proportion of successes was 0.283, supposing mental suggestion, while it was but 0.250 according to the calculus of probability, and 0.240 according to comparative experiment without suggestion—a difference of 0.033 in favor of the hypothesis.

These figures, it is seen, are even higher than those obtained by Richet; but the number of my experiments being much smaller, it is probable that were it increased the differences would be equalized.

In another series of experiments with another person (also non-hypnotizable, but very nervous and easily impressionable), upon guessing only the *color* of the cards, I obtained a difference still more marked in favor of suggestion, thus:

Without mental suggestion	0.42
By calculus of probability	0.50
With mental suggestion	0.60

A surplus of $\frac{1}{10}$. Mr. Richet thinks that experiments on the *color* of a card are inconclusive, because of a large influence of chance, which, with the probability of $\frac{1}{2}$, must efface the very slight influence of suggestion. That would be true *if the suggestive influence were absolutely the same in both cases*. But I do not think it is so.

The difference between *red* and *black* being clearer and simpler than the difference between *spade* and *club*, or between *heart* and *diamond*, the imagination of the subject ought to receive more readily a suggestion of the former than of the latter. Does not Mr. Richet himself say that, with a smaller chance, $\frac{1}{52}$ for example, for a full designation of the card "the conditions of suggestion are *bad*, as if the selecting from among 52 cards were too large a matter for suggestion to act clearly?" The remark is very just; but then *à fortiori* suggestion ought to act still more clearly when there is a question merely of a color.

From all his experiments, Mr. Richet infers the *probability* of the following propositions:

1. *The thought of an individual is transmitted* without the help of external gestures to the mind of an individual placed near him.

2. *This transmission takes place in different degrees* in different individuals; it is also extremely variable in the same person.

3. *This transmission is usually unconscious*, in that it acts rather on the unconscious intelligence than on the conscious intelligence of the individual perceiving and of the individual transmitting.

4. In healthy adults who are *not hypnotizable*, *the degree of probability of this transmission hardly* exceeds $\frac{1}{16}$ (we have seen that under exceptional circumstances it may amount to $\frac{1}{10}$).

5. *The general probability in favor of suggestion may be represented by* $\frac{1}{13}$.

The personal impression that results from all these experiments is as follows: the method is not of a kind to produce conviction; but if mental suggestion is a fact, this method has rendered a valuable

service to the cause by establishing for it a basis of probability, a real ground to stand on, and by awakening the curiosity of investigators.

Were it not for Mr. Richet's work, I should probably never have reverted to this unfruitful study and its manifold illusions. What induced me to persevere was the following passage :

"All my experiments (says Mr. Richet) were made upon non-sensitive persons, as my friends and myself ; it will be interesting to know what effect they have on persons really sensitive, hypnotized, hypnotizable, hysterical, nervous, or trained by long practice in the perception of suggestions. Unfortunately I have had no opportunity to make *such* research, as I have not had at command a sensitive subject."

As one has only to provide himself with a hypnoscope and to enter a company of a score of persons, in order to find a good subject, I undertook a series of experiments for the purpose of verifying those made by the Society for Psychical Research, of London. Here are the results of my first seance :

The subject, Mrs. D., is 60 years of age, hypnotizable. (Hypnoscopic experiment: heaviness, paralysis, analgesia.) Chronic articular rheumatism, very strong constitution, very robust, remarkable intelligence, accustomed to literary work, a good deal of erudition, internal impressionability, without external signs ; psychically active temperament, but quiet ; of exceedingly gentle disposition. Her back is turned toward us. Mrs. P. and myself think of an object while we touch the subject ; the latter is informed that the object is

A Playing Card :

OBJECT THOUGHT OF	OBJECT GUESSED
1. Six of spades. (Prob. = $\frac{1}{52}$).	Six of black.
2. Ten of spades.	Red, not black, a ten-spot.
3. Knave of hearts.	Red, a king ? A queen ?

A Color :

4. White.	White.
5. Yellow.	Yellow.
6. Black.	Black.

Any Object :

7. A lamp.	A book, a cigar, paper. Result=0.
8. A silk hat.	Something blue, light. " "
9. An armchair.	A sugar-bowl, bureau, a piece of furniture. Result=0.
10. Salt.	A taste of salt.

A Letter :

11. Z. (Prob.=$\frac{1}{24}$)[1].	I. R. S. Result=0.

A Person :

12. Valentine.	Valentine.
13. Mr. O. (myself.)	Mr. D., Mr. Z. Result=0.

[1] *Sic.* But as the number of letters in the French alphabet is 23, the probability would seem to be one in 23, not one in 34.—*Translator.*

A Portrait :

	OBJECT THOUGHT OF	OBJECT GUESSED
14	The Bishop. (Prob $=\frac{1}{8}$).	It is the Bishop.

A Digit :

15.	8.	7, 5, 2, 8. Result=0.

An Impression :

16.	Joyful.	Sad. Result=0.

Any Figure :

17.	A black cross.	A tree, crossed branches. Result=0.
18.	A long-bearded old man.	A man, bearded, white beard.

A Photograph :

19.	Of a boy. (Prob.$=\frac{1}{2}$).	A girl, children. Result=0.

A Name :

20.	Marie.	Marie.
21.	Adam.	Jean, Gustave, Charles. Result=0.

A Number :

22.	Ten.	Six, twelve, nine, ten.

Any Object :

23.	A book bound in blue satin.	Violet color, pink. Result=0.
24.	Gold pencil case on a blue ground.	Something black on blue. Result=0
25.	Ace of spades on a black ground.	Something black, blue, a card, ace of clubs.

A Musical Instrument :

26.	A trumpet.	The violin. Result=0.

A Digit :

27.	Three.	2, 5. Result=0.

An Object in the Dining-room :

28.	A plate with figure on it.	A plate with figure.

A Taste :

29.	Of salt.	Sour, bitter. Result=0.
30.	Of sugar.	Sweet.
31.	Of strawberries.	Of an apple, grapes, strawberries.

The subject was visibly fatigued, and we interrupted the experiments.

I was much surprised. Of 31 experiments at least 13 were entirely successful, though often the probability was exceedingly small ; even the misses in some cases presented evident analogies. And hardly 12 out of the whole 31 could be regarded as absolute failures. The first three, for example, though not entirely exact, plainly uphold the probability of suggestion.

One doubt alone troubled me. I have already explained what I call the *psychic atmosphere*. All the objects thought of, except a few cards drawn at random, were chosen during the seance by myself or

by Mrs. P. Now, it well might be that we were all three quite unconsciously borne along, so to speak, by a current of associations. This supposition may seem improbable, but in making it I had in mind a prior experiment of my own that was truly astonishing.

There were five or six of us staying with friends in the country. We amused ourselves as we could; among other things by playing tricks with cards. Then we passed to guessing. Having by chance twice or thrice guessed a number chosen between 0 and 6, and several cards chosen mentally, I thought I noticed that after repeated experiments there was set up in our minds a mechanical series of cards or of numbers, based on contiguity, likeness, or contrast, and that this gave me a *presentiment* of the card or number to be selected immediately. I had only to give the rein to this unconscious and unreasoned conjecture in order to perceive in my imagination the image of a card that was *in the air*, so to speak. I was almost certain that now it was the turn of, say, the king of diamonds, and I would ask my neighbor to think of a card. He would think of the king of diamonds.

It was no suggestion from my neighbor, for before he chose his card I had made up my mind to say "king of diamonds." And often in such cases it happened that another person would remark: "Well, that is curious! I thought of the same card!" Thus, it was *in the air*.

Sometimes I have been able to discover the probable mechanism of this enchainment. Thus, 28 was chosen next after 47 probably because $4 \times 7 = 28$. Again, if among the numbers between 1 and 9 one chose 8, that is, a number near to 9, another person would choose 2 or 3, to be farthest away from the former; 2 and 3 would lead to the thought of 6; then, in order not to take again the numbers already used, the choice would fall upon 4 or 5, associated to 3 and 6, which were pronounced more aloud than the others, and so on. It is impossible to foresee all these relations between numbers: if they chanced to agree in several persons at once they constituted the *psychic atmosphere*, playing the part of a prompter.

Evidently the mechanism of these guesses seldom suffices to explain certain unexpected coincidences; but being a determinist in psychology as in other matters, I have said to myself: I am ignorant of this mechanism; therefore I cannot justify the general hypothesis by proofs; yet, all things being determined by an enchainment of causes and effects,[1] it is conceivable that an omniscient intelligence, knowing all the impresses of sensations in our brains, all the connections of our thoughts, all our habitudes, weaknesses, and other qualities,

[1] This clause furnishes a definition of the term "determinist:" One who holds that all things are determined by an enchainment of causes and effects. "Determinism" contradicts "free will."—*Translator.*

might easily calculate or foresee not only our choice, but also the answers of the subject. And as it is certain that the unconscious of somnambules is a Grand Master in occultism, who is there that may boast himself to know the limits of its power? The fact that my subject was not in somnambulism was no obstacle, for I have long been convinced that *all* the phenomena of somnambulism may present themselves isolatedly and momentarily in the waking state.

I beg the reader not to be surprised at these rather conjectural speculations. In dealing with a phenomenon so controverted, so extraordinary, when after long years of research one sees that all his convictions, acquired theoretically and experimentally, are shaken, one defends himself as best he can.

But to return to the facts. Here are three experiments in favor of the psychic-atmosphere hypothesis, hastily made upon another person, not hypnotizable:

A Color:

OBJECT THOUGHT OF	OBJECT GUESSED
32. Red.	Pink.

A Flower:

33. Lilac.	Lilac.

A Person Present:

34. Mr. J.	Mrs. D.

The general outcome of these three experiments seems quite favorable to the theory of transmission. But let us consider the circumstances. The subject is told that there is question of some color, and he guesses it only approximatively; the color was *red;* it becomes *pink.*

The subject is told that the test is some flower. A bunch of lilacs was on the table; every one noticed it, and it was uppermost in the minds of all. Then, the question being about a matter a little more remote, with the probability still strong, only some dozen persons being present, there was a check. Not only does the subject not guess the person, but he names a woman instead of a man. Consequently, these three experiments are almost valueless—and, when I say *almost*, that is solely because of a certain resemblance between red and pink; but the thought of pink may have been called up by a purely fortuitous cause, that is to say, one having nothing to do with suggestion.

Let us now come back to our first subject. Here is a second series of experiments, made with greater precaution, care being taken to avoid the enchainment of associations (May 2, 1885).

Any Object:

OBJECT THOUGHT OF	OBJECT GUESSED
35. A bust of Mr. N.	Portrait . . . of a man . . a bust.

Any Object:

OBJECT THOUGHT OF	OBJECT GUESSED
36. A fan.	Something round. Result = 0.
37. A key.	Something made of lead . . . bronze . . . it is of iron.
38. A hand wearing a ring.	Something shining, a diamond . . . . a finger-ring.

A Taste:

39. Acid.	Sweet. Result = 0.

A Shape:

40. A Square.	Something irregular. Result = 0.
41. A circle.	A triangle . . . a circle.

A Letter:

42. M.	M.
43. D.	D.
44. J.	J.
45. B.	A, X, R, B.
46. O.	W, A; no, it is O.
47. Jan.	J . . . (continue!) Jan.

Third series, May 6, 1885. Twenty-five experiments were made, notes of which, unfortunately, I have not kept, except as to the following, which surprised me most. (The subject has her back turned toward us, holds a pencil, and writes the thought that comes to her. We touch her back lightly while looking on letters written by ourselves).

OBJECT THOUGHT OF	OBJECT GUESSED
48. Brabant.	Bra. . . (I strive mentally to aid the subject, saying nothing.) Brabant.
49. Paris.	P. . . aris.
50. Téléphone.	T. . . éléphone.

Fourth Series, May 8. Same Conditions.

51. Z.	L, P, K, J. Result = 0.
52. B.	B.
53. T.	S, T, F.
54. N.	M, N.
55. P.	R, Z, A. Result = 0.
56 Y.	V, Y.
57. E.	E.
58. Gustave.	F, J, Gabriel. Result = 0.
59 Duch.	E, O. Result = 0.
60. Ba.	B, A.
61. No.	F, K, O. Result = 0.

A Number:

62. 44.	6, 8, 12. Result = 0.
63. 2.	7, 5, 9. " = 0.

(I endeavor to have represented in the subject's mind the written numbers, not their sound.)

64. 3.	8, 3.
65. 7.	7.
66. 8.	8; no, o, 6 9.

Thirteen experiments followed with fantastically drawn figures, only five of which presented a general likeness, without much exactitude.

A Person Represented Mentally:

67. The subject.	Mr. O. No, it is myself.
68. Mr. D.	Mr. D.

Any Image (or View) Whatever:

69. We imagine a crescent moon, Mrs. P. representing it to herself with a background of clouds; I, with one of deep blue.	I see the clouds flitting . . . A light . . . (with a look of satisfaction) it is the moon.

If after these experiments any one had asked whether I believed in thought-transference, I should have answered affirmatively. From the point of view of conscious, scientific reasoning, one must have surrendered to the evidence. Chance could not have produced so many fortuitous hits. For example, if we look only at the experiments with letters, *leaving out of account the whole words guessed*, of 20 experiments 15 succeeded, whereas probability allows only *one* success in 24, or o in 20—zero against fifteen! To hit the chance guess of the three-letter combination *jan*, would have required 25^3 (= 15,625) *experiments* without suggestion, while with suggestion *one* sufficed.

Thus, from the objective standpoint, my skepticism might well surrender before the eloquence of the facts. But—and here is the oddity of the thing—in problems of this kind the observer's *subjective impression* is sometimes worth more than a purely empiric showing. Evidently the observer must have a general scientific routine and a special acquaintance with the phenomena belonging to it; but then it is upon his instinctive *subjective impression* that I should most rely. He may give me all the details—and it is impossible for him to give *all* the details of conditions and circumstances—but if I do not see that inwardly, subjectively, he is not merely astonished, but convinced, conquered by the facts observed, without having his reason upset, as may unfortunately happen—it was so with Zöllner[1]—I would give no particular credence to his revelations. I should prefer an almost entirely defective experiment, but accompanied by that personal

[1] Slade, the American spiritist, succeeded in making the German mathematician Zöllner believe in a fourth dimension of space, by showing to him a knot produced on a single cord after the two ends of it had been tied together and sealed with wax bearing the impression of Zöllner's seal!—*Translator.*

impression of an instructed and honest man which is expressed in the cautious yet decisive phrase: "There's something in that."

Now, this personal impression was mine when I made those hurried experiments; but the thing that was always lacking was that other impression, subjective also, but more decisive: "Here is direct transference of thought."

Singularly enough, nearly every time that the subject was going to guess our thoughts, I had a presentiment that it would be so. It seemed to me that, despite all precautions, and though we were all in perfectly good faith, there was a certain trickery on the part of our unconsciouses, and that they were fooling us. It seemed to me that even in choosing the objects hardest to guess, I was astutely making the choice that most facilitated success; that even when a card was drawn at random, I substituted another for it under some insufficient pretext, even forgetting this manœuvre, and remaining quite at rest in my conscience, while my partner (*aide*) nothing suspected.

I fear I shall be misunderstood. I am speaking of a phenomenon almost inappreciable, of operations infinitesimal, transient, more or less unconscious, caused by the psychic atmosphere. I have been long used to make psychological observations; they have been the principal occupation of my life, from early childhood I might say, for since my fifteenth year I have been taking daily notes (some of them published in my native language), and I was but seventeen when I wrote my first dissertation on "Methods of Psychological Study," published in 1869, wherein I showed (for the first time, I believe) how the phenomena of hypnotism may be exploited under the form of a special method by *positive* theoretic psychology.

Consequently I do not wish to be suspected of any sort of mysticism, and I think I have the right to claim for myself the routine that is necessary for making exact observations. But just because of this long practice I have reached some empiric subtilties very difficult to express. Psychology has throughout for me an aspect widely different from what one sees in the best works on our science. The psychology of the day seems to me gross and crude in view of the subtilties of real life as I see it. The theory of association of ideas, for example, which has been made, and with reason, for the nonce, the sole ground of the whole psychology of phenomena, is for me only a partial and quite inadequate expression of the mechanism of psychic life. It is but a rough draft of a delicate mechanism. It may suffice for the needs of instruction in the elements of psychology, but not for a finished science. I am free to confess that with the association theory of to-day I do not even see why our ideas associate, and in general why they live, circulate and produce sensible effects. And yet I am a determinist, and it is no faculty, no obscure force, that I would add to the association theory to make it true to fact and life.

The question is one of details, but of details that stand related to the current theory of association as vision through a microscope is related to direct vision.

For explaining the larger phenomena of psychic life this association-anatomy is well enough; the thing we need is a microscopic histology of association when we have to do with rare phenomena, *i. e.*, with phenomena *rarely noticeable and rarely noticed*—for that, too, is a point of my personal separatism in psychology, to wit, that rare phenomena are such *only because we are rarely capable of seeing them.* On the other hand, we should be less ready to discern an enchainment through contiguity, likeness, or contrast, in time or in space, were we to see things through a psychological microscope which should oftentimes distinguish like phenomena, assimilate contrasts and dislocate contiguities, interposing a number of intermediate links and agencies.

Unfortunately, when it comes to setting forth details precisely, two things are lacking: first, clear vision of these details, and then, even when they are seen passably well, the possibility of expressing them correctly. Here we may call to mind the vicious circle of the sophist Gorgias. Plainly our skepticism is not, like his, nihilistic. We do not see clearly to-day, we shall to-morrow, and no doubt we shall little by little find new words for new ideas. In the meantime it is better to stand still where we are than to create an incomprehensible language and to talk Volapük under pretense of propagating a universal science. We have had plenty of Volapükian psychologies which, albeit they were created by Kants and Hegels, no longer exist in the estimation of exact science. All this notwithstanding, the Kants and Hegels may have had profound ideas that will be understood, *better than by their authors*, a few centuries hence.

I have often mentioned the unconscious. I have even personified it a little, without any back-thought,[1] however. I concede to German psychology the great merit of having brought to light that absolutely true and fundamentally necessary theory. But see what happened when men set about defining it prematurely; see what it has come to be in the deft and reckless hands of Von Hartmann; a fantastic romance of the unconscious, an Edgar A. Poe story, not even as near the facts as a story of Jules Verne's!

Hence it is that I choose to content myself with a few hints that to me seem clear, instead of plunging into subtilties that I do not myself quite understand. Later, when we come to certain details of the question, we shall see what it may be possible to add.

So, then, I was convinced of the reality of the *facts* of mental suggestion, but not of suggestion itself. It remained to formulate the theory of the facts, and that theory appeared to me far removed from

[1] *Sit venia verbo.* It is meant to translate *arrière pensée*—the thought (or intent) that is behind, or *lies back of*, an overt act or speech.—*Translator.*

the theory of *direct action of mind upon mind*, such as Mr. Richet received.

Finally, here perhaps were two or even more different processes to be discovered.

First, a *concordance* between two unconscious mechanisms, as between Leibnitz's two watches, a concordance resting on a sort of harmony preëstablished through the mutual interchange of the ordinary conscious sensations, and in which the object chosen as well as the object guessed is determined independently the one of the other, but by one self-same unconscious determinant set of works.[1]

Then, in some cases, a true *perception* of thought by *intermediation of external signs* that may easily escape us, seeing that so perceptible a sign as the tension of the muscles in the direction of the object thought of has taken so long to be discovered. There would thus be an exaltation of perception, but of the normal perception for physiognomic, pathognomic, and ideognomic signs, that usually enable us only to distinguish joy from sadness, quiet enjoyment from intense pleasure; sympathy, distrust, irony, or sincerity, in the touch of a hand or in the tone of a voice; whereas here, in virtue of an exceptional perceptibility, those signs would enable us furthermore to divine whether one is thinking of *yellow* or of *blue*, of a *round* figure or a *square*.

Finally, over and above all normal perceptibility there is perhaps ground to suppose a transmission, *always indirect*,[2] of vibrations produced by the thought itself, and capable of reconstructing the thought, like as the human voice produces undulatory telephone currents that can reproduce speech at another like station.

Henceforth all this was possible, and it behooved to look forward to an unheard-of complexity of phenomena. Consequently it was my wish to simplify at least the conditions of experiment. In the experiments already recited this was impossible. The subject had always to be notified in advance that the experiment was to be made, consequently his unconscious was put on its guard. The subject could take for granted that we would avoid repeating the same experiments, and that if at the seance before we thought of *blue* and *yellow*, it would now be the turn of *red* and *green*.

We had to circumscribe, and that pretty narrowly, the category of objects to be chosen, and then the thought of the subject was also circumscribed in advance, and had to rummage in only one of the receptacles of memory, there to concentrate all the perspicacity of his divining power.

[1] *Rouage*—The works of a watch, the "movement."

[2] The meaning of *indirect* here is gathered from the author's illustration. The human voice is one thing; the undulatory current another. The result in a receiving telephone is the human voice *indirectly* transmitted: it has suffered transformation and retransformation in the passage. The case may be the same when thought is supposed to be transmitted from one brain to another.—*Translator.*

Of objects belonging to the same category, only a very small number will be in sight and capable of being chosen for the experiment. Suppose the thing to be thought of is a flower, assuredly one will not choose *Scrophularia nodosa*, nor *Contrayerva officinalis*, which one would find it difficult to bring clearly before his imagination: one will choose a rose, a lilac, a violet, and then from time to time he will meet with success. The subject will *divine* (that is the word) our thought. But that is not what I want. I want a fact of actual thought-transference wherein shall be nothing to be divined, and wherein the unconscious may calculate as it will without prejudicing the precision of the experiment.

What I want is that a subject in nowise forewarned, nor expecting anything, neither seeing nor hearing anything, shall manifest the action of my thought by some reflex action *visibly connected with that psychic impulse*. I shall be content with any sign however slight, but it must be a sure sign and a *constant*, and it must be one that cannot be referred to any other cause but my mental action. That is what I want; and till I have in my hands a fact of that sort I shall not have *subjective impression* of the reality of a mental action; but till then it will not be worth while to make a special, thorough study of the matter and to brave the prejudices of the scientific.

The fitting occasion for that decisive experiment was not long in coming.

CHAPTER III.

TRUE MENTAL SUGGESTION.

I WAS attending a lady suffering from hysterepilepsy, whose ailment, already of long standing, was aggravated by an attack of suicidal mania. Mrs. M., 27 years old, strong, and of good constitution, has the look of perfect health (hypnoscopic exp.: insensibility and almost instantaneous contracture of the entire arm). Convulsive seizures of the major hysteria dating from childhood, almost. Hereditary influences very strong. For some time past, besides these principal symptoms, at sundry periods, attacks of mental alienation, with congestion of the anterior lobes and anæmia of the posterior lobes of the brain; paralytic, nervous, fainting fits, and epileptic seizures of brief duration. Transient contractures and amblyopy, more marked on the left side. A single *hysterogenic* point beneath the left clavicle. A *delirogenic* point on the right occiput corresponding to the superior occipital fossa. No anæsthesis. Pressure on the ovaries arrests the attack for a moment. Sensitive to tin, but also to other metals in different and varying degrees. Temperament active and sprightly,

combined with extreme *inner* moral sensibility, that is to say, without external signs. Character eminently truthful, kindliness very marked, disposition to self-sacrifice. Intelligence remarkable, many talents, capacity of observation. Momentary lack of will-power, painful indecision, but afterward exceptional firmness. The least moral fatigue, an unexpected impression of small importance, whether pleasant or painful, is reflected on the vasomotors, though slowly and imperceptibly, and brings on an attack or a nervous fainting fit.

One day, or rather one night, her attack having passed away (including the delirium phase) the patient was sleeping quietly. Awaking suddenly and seeing us (a woman friend and me) beside her bed, she begged us to go and not to tire ourselves for her sake to no purpose. She was so pressing that in order to save her a nervous crisis we left her. I went downstairs slowly (she lived on the third floor), but halted several times and listened, being haunted by a presentiment of mischief (she had given herself several wounds a few days before). Reaching the courtyard I halted once again, considering whether I should leave or not. Suddenly the window was opened noisily, and I saw the patient lean out with a rapid movement. I sprang to the spot whereon she would fall, and mechanically, without attaching any importance to what I did, I concentrated my will to withstand her fall. It was a silly thought, and I was but imitating the action of billiard players, who, foreseeing a *carambolage*, strive to stop a ball by gestures and speech.

Yet the patient, already leaning out over the window sill, stopped and drew back slowly and by degrees.

The performance was repeated five times in succession, and at last the patient, as if fatigued, stood motionless, her back resting against the frame of the window,[1] which remained open.

She could not see me, for I was in shadow and night was falling. At that moment Miss X., the patient's friend, ran in and seized her by the arms. I heard them struggling and hastened upstairs to help. I found the patient in a fit of insanity. She did not recognize us, taking us for robbers. I succeeded in releasing her grip on the window frame only by pressure on the ovaries, which made her fall upon her knees. Again and again she tried to bite me and only with much difficulty was I able to put her again in bed. Keeping up with one hand the pressure on the ovaries, I brought about the contracture of the arms, and at last endormed her.

Once in the somnambulic state, her first words were, "I thank you and beg pardon." Then she told me that she had wished to throw herself out of the window, but that whenever she attempted it, she felt herself "lifted from beneath."

[1] The "French" style of window, hinged on the side.—*Translator.*

"How so?" I asked.

"I do not know."

"Did you suspect I was there?"

"No; it was just because I thought you had gone away that I wanted to carry out my plan. Yet it seemed to me now and again as if you were beside me or at my back, and that you did not want me to fall."

This experiment—or rather accident—was, of course, not enough to prove action at a distance. But it suggested to me the thought of studying the question anew. As there was an appearance of action, it was a very easy matter to test it experimentally. But in order to have the conditions just what they ought to be, I breathed not a word to any one about what I purposed to do, and I even resolved to wait a few days, so as to arrange the details of the experiment.

I had been in the habit of endorming the patient every other day, and I used to leave her in profound slumber (aideic state) while I made my notes. Two months' experience gave me the assurance that she would not stir till I should approach her in order to induce somnambulism proper. But this day, after taking a few notes and without changing my attitude (I was several yards distant from the patient, outside of her field of vision, with my note-book on my knee and my head supported by my left hand), I pretended to be writing, making the pen scratch as it had been doing, but inwardly I concentrated my thought upon an order I gave her as follows:[1]

December 2.

1. Lift the right hand!	1st minute: no action.
I watch the patient, looking through the fingers of my left hand on which my forehead rested.	2d minute: agitation in the right hand. 3d minute: agitation increases, patient frowns and raises the right hand.

This experiment, I confess, moved me more than any other.

2. Get up and come hither!	Patient frowns, stirs, rises slowly and with difficulty, comes to me with hand outstretched.
(I lead her back to her place without uttering a word.)	
3. Take off bracelet from left arm and hand it to me!	No action.
I touch her on the right arm, and perhaps give it a slight push in the direction of her left arm, while I concentrate my thought upon the order given.	She puts forth her left hand, rises, and goes in the direction of Miss ——, then toward the piano. She sits down exhausted. She takes off her bracelet. (Seems to be reflecting.) Gives it to me.

[1] Most of these experiments were communicated to the Society of Physiological Psychology, January 25, 1886. Some of them have been published in the *Revue Philosophique*, August, 1886.

4. Get up, draw the armchair up to the table, sit beside us !	She frowns, gets up, and comes toward me.
	"I have yet something to do."
	Seeking something ; touches the stool and displaces a glass of tea.
I check her hand thus astray.	She steps back, *seizes the armchair, pushes it toward the table* with a smile of satisfaction, and sits down, dropping into the chair through fatigue.
	"They tell me to carry, and do not tell me what. Why do they *speak* so indistinctly ?"
5. Hold out the right hand !	She stirs.
	Holds the right hand out.
	Tries to rise.
Stay seated !	She settles herself again in the chair.
Give the left hand !	Movement of left hand, but she does not hold it out. Rises and goes to the sofa.
Give the left hand !	Gives the right.
Not that ; the other ![1]	Gives the left hand.

It is to be remarked that even in the waking state the patient often mistakes one side for the other.

During experiment 5 *active somnambulism* manifests itself ; the patient converses with us in a playful vein. She no longer obeys the orders. "I am now going to sleep," she said.

She slept. During the sleep there were some traces of an hysteric attack. At length she seemed to awake. "There is a tingling in my head," said she, "that will not let me sleep. I don't want to sleep any longer. Sit by me." "Are you still in somnambulism ?" I asked. "Yes." (This patient was able to note each phase of her state with wonderful precision—a very rare circumstance, indeed. I often pretended not to recognize the state she was in, so that she herself might describe it.)

"And if you go to sleep in that state, is it all the same as if you were in the waking state ?" "Oh, no ; for now the legs and the body go to sleep first, and then the head. The head, too, awakes first, so that I can easily tell whether I have slept well or not ; whereas when I go to sleep from the waking state, I go to sleep in the head and I know nothing more. Then, too, when I converse, being magnetized, *I am resting all the same ;* whereas if I were to converse in the waking state my head would be tired and drowsy."

[1] All these orders were given mentally and without gesture. No word was spoken.

December 3.

Mrs. M. is endormed by the process of gazing,[1] and falls into a very profound slumber (*paralytic aideia*).

6. Answer whether you hear me?	No action.

I put the same question *viva voce*. She does not hear. A moment later she stirs slightly.

"You did not hear me just now?" I asked. "No!" "Why?" "Because my sleep was too deep." "Will there be an attack this evening?" "No!"

I therefore left her to herself, and a few minutes afterward began the experiments again.

7. Give me your right hand!	Frowning.
Give me your hand!	No result.
No matter which hand.	Gives the left.

If at this moment I speak to her, touching her at the same time, she replies; if I speak to her without touching her, she hears only unintelligible sounds.

I tell her that I am obliged to be absent fifteen minutes; once outside, I try to call her mentally:

8. Come hither!	Frowning.
	General agitation of the body.

Here the experiment is interrupted by a singular accident. The action from a distance produces in her a general hyperæsthesia, and in that state she "feels incommoded by something on her right;" "an unbearable stench horrifies her;" "an imaginary noise, produced by the irritation and congestion of the brain, prevents her hearing" me.

"It seemed to me," she said, "that I must get up and walk about; but that horrible atmosphere was suffocating me. *That thing* (*celà*) prevented me; *that thing* does not love you, but *that thing* is ashamed to confess it."

"What is it, pray?" "I do not know; but deliver me from *that thing*"—and she made gestures of repulsion toward the right. We saw nothing out of the common in that direction. At last I noticed that there was on the flower stand a new plant, and I removed it. "Ah, at last!" said the patient; "thank you; I was near having a paroxysm."

The new plant had been brought that day by one of her friends, a lady for whom, in the normal state, she had a strong liking, but whom in the somnambulic state she could not endure even at the distance of several yards. This I knew already, having witnessed a terrible

[1] *Par le regard.*

paroxysm caused solely by the presence of this lady; but it never occurred to me to suppose that an *object* that had belonged to her would have the same influence. First I thought the patient's abhorrence of the plant might be due to its odor, but it was nearly odorless. Then I made several experiments with objects coming from the lady, mixed with other objects. For instance, I placed upon the couch beside the patient, yet at some distance, a roll of music brought by this same lady. Having just touched it lightly with her hand in making a gesture, she drew herself away from it quickly, asking who it was that was treating her so ill. So with other objects. She never made out what was the matter, but she always was conscious of an antipathic influence. Even a playing-card coming from the lady, and shuffled with several others, was rejected as "disagreeable." I must add that the young lady in question was a great friend of Mrs. M., and was jealous of the influence I exercised over my subject.

December 5.

(Our patient, on awaking, passes momentarily through a transient state of monoideism, and then she has always a sense of the mental state of the persons around her. She will say: "Why have you greater confidence to-day?" "Why is she so worried (or so happy) to-day?" And so on. But once fully awake, she no longer has this sense.)

9. An experiment in the state of *genial, active somnambulism.*[1]	No action. (Patient is half awake) "Where is she—Mary? She must have a wearisome task to perform. I believe she is thinking of nothing, *for I have no feeling of her.*"

Wishing to sit back of the table I came near falling, the chair being lower than I thought. The patient uttered a cry. "What is the matter?" I asked. "It seemed to me," she answered, "as though something were giving way *beneath me.*"

If any one pinches me she complains of it, yet she does not know it is I that suffer. I tell her that I want to put her a few questions. "Then endorm me a little more," she said; so I make a few passes in front of her eyes. At this moment she is in *passive somnambulism, i. e.*, she answers easily and volubly every question put by me (and by me alone), but does not of her own accord say anything.

"Can you tell me," I ask, "in what degree of sleep you undergo the action of my thoughts?"

"When the members sleep in very deep slumber," (each part of

[1] *Somnambulisme actif gai.* In the original this exp. is numbered 8, and the words of the subject are *given in the text*, not in two columns, like the others. The author forgot to state the order given to the subject.—*Translator.*

her body can be put to sleep and awakened separately), "and when I cannot think by myself."

"But if, then, I order you to rise, you will not be able to do so?"

"Alone, no; but if you will it strongly something will lift me."

"Do you know beforehand what I require of you?"

"No, but it gives me an impulsion; and I prefer you to divide your thought. I cannot take it in all at once. I do not understand the words, and I believe that you might think in any language whatever; I feel only an impulsion that comes upon me and at last controls me." (Here I gave some explanations to Marie.) I now asked: "Did you hear what I said?"

"I heard you speaking, but understood nothing, for you had not the intention to be understood by me."

"If I do not address my speech to you, what do you do mentally? Do you think of anything?"

"When I am in light sleep as now, I can think well *if you are near me;* but if you withdraw there is a veering in my head[1] as though you were to leave me in a dark room."

"And if I were to put you in a deeper sleep?"

"In that case I should know nothing, and were you to leave me, I should remain just so, not suffering anything."

"In what state, then, in your opinion, is thought-action easiest?"

"*For that the sleep must be very deep, but I must hear you all the same.* In fact, I hear you always, or at least I think I do (plainly the somnambule could not know whether she heard me in the state of absolute aideism); still, sometimes I hear only detached words; for example, you put me the question, 'Do you hear me at this moment?' and I hear only 'hear' and 'moment;' or again, I hear all the words, but each word isolated, so that when you are at the end of a phrase *I have forgotten the beginning;* the first words are gone from me (monoideism). Sometimes, too, I hear you and understand you well, but I have not the strength to answer."

"And in the state you are in at this moment could you receive my thought?" "No," she said. I gave her, mentally, the order "Awake!" No result. But some minutes later she said of her own accord: "Awaken me;" and then I was able to awaken her from a distance. (A simple yea never sufficed to awaken her.)

December 7.

The patient is in the *aideic* state and partly tetanized—arms in contracture, the legs a little stiff.

10. Rise, go to the piano, take a box of matches, bring it to me, light a match, go back to your place!	She rises with difficulty. Comes near me.

[1] *Il se fait un revirement dans ma tête.*

Go to the piano!	Goes to the piano, but passes beyond.
Come back!	Turns back.
Still farther!	Goes toward the door.
I stop her with my hand.	Returns to the piano.
Lower!	Seeks too high.
Lower!	No result.
Take the match-box!	Lowers her hand.
Take the match-box!	Touches the box, then retreats.
Come to me!	Touches it again, and takes it.
Light!	Comes to me.
Light!	Wants to pass the match-box to me.
Light!	Takes out a match.
Go back to your place!	Lights it.
11. Bring the right hand to my lips.	Returns to her place.
Raise it!	Her right hand stirs.
Raise it!	No result.
Give it to be kissed!	Raises the hand.
Not that! To my mouth!	Brings the right hand to her face; removes her cravat.
To the lips!	Brings her right hand near my head.
	Brings it to my lips.

December 9.

The patient is sleeping well; *aideic* state, with tendency to contractures.

12. Lie on the right side.	No result. She rises and stops; her whole body contractured, perhaps under the influence of my gaze, which was fixed intently upon her.
I suppressed the contracture by means of a light massage. I take her hand, and, at a given moment, try mentally to	
13. Produce contracture in the left arm.	The left arm almost instantly becomes stiff.
14. Lie down!	No action.

At this moment there is a state of hyperacusia: the slightest noise irritates her; then she falls again into a state of general immobility.

Then suddenly: "I do not hear your thoughts well, because either I sleep too soundly or not deeply enough."

Opening her left eye produces catalepsy in the right arm, then in both arms. Opening the right eye produces no result at all.

15. Ordered to scratch her cheeks.	No action.

At this moment a flaming match held before one of her eyes, opened for the purpose, produces no reflex action. Even the contraction of

the pupil is not as great as usual, though but a moment before the contraction was nearly normal, and the patient said she saw "a little brightness." Now she says she sees nothing. I awaken her; she seems to be pretty well, but little by little a paroxysm comes on. I stop it by magnetizing her anew.

December 11.

(Experiments made in presence of Mr. Sosnowski, engineer.)

The patient doing well. I put her to sleep in two minutes, and show the three principal states, viz.:

1. Aïdeia (without thought, very deep sleep).
2. Monoïdeia (one thought alone possible).
3. Polyideia (somnambulism properly so-called).

Then by means of a few passes in front of her eyes, I deepen the sleep to the transition degree betwixt aideia and monoideism. She now hears me even without touch, but she is totally paralyzed and insensible.

16. Come to me!	She rises and comes straight to me.
I change position and hide as far away as possible.	
17. Shake hands with Mr. S.!	She extends the right hand and gives it to Mr. S.
(The experiment was proposed by Mr. S.)	

At this moment the opening of her eyes did not produce catalepsy. The touch of Mr. S., as of every stranger, is highly disagreeable to her. She will not allow them even to come within two feet of her.

December 18.

18. An experiment in the state of active somnambulism, before the paroxysm.	No action.
	A few minutes later the paroxysm comes. Then I put her into deep sleep for the whole night.

She awoke quite well the next day.

December 27.

In endorming the patient *I prolong the passes beyond the usual time*, for without the passes she fell asleep with difficulty. The sleep becomes very deep. She no longer hears me at all. The pulse is weak and uneven, pulsations 80. The respiration is short and intermittent. I quiet her by laying my hand upon the pit of the stomach.

19. The subject is to go to the table, take a cake and give it to me. (Seeing that the sleep is too deep, I "awaken" her arms and ears.	No result.
She hears[1] me without my touching her.)	She rises.
	Comes to me.

[1] "Hears" his thoughts.—*Translator.*

I stop her.	Stands hesitating in the middle of the room.
	Approaches the table.
Extend the arm!	No action.
" " "	She extends the arm.
Lower!	She gropes on one side.
"	She touches the cake and starts.
Take it and give it to me!	She takes it and gives it to me.

She is evidently fatigued; her eyelids droop. "Why," I asked her, "did you take the cake and give it to me?"

"Because all the other objects were *strange*, while the cake seemed to me *well known*. But I did not know it was a cake. I knew only that it was something less repellant than the *strange* objects. I was not sufficiently asleep (active somnambulism.) *My ears should not be awakened.*"

A few minutes later an experience was had, all the more curious because unexpected. I was absorbed in thinking of a matter of personal concern that troubled me the whole day, and despite its intimate nature I must make it known here in order that the reader may understand the occurrence.

The case of Mrs. M. taking up all my time, I neglected several affairs, so that I found myself greatly straitened for money. My attendance on the patient was wholly gratuitous and I did not wish that she should have any suspicion of my embarrassment. As I could not leave her because of the seriousness of her condition (she was constantly subject to fits of suicidal mania) my thoughts were ever returning to the question of finance.

I chatted with the patient pleasantly, but perhaps my voice betrayed my unrest, and I saw that she divined what was in my mind. She halted in the conversation and became pensive. From long-continued observation I too was able to guess the thoughts that occupied *her* mind. After reflection she said to herself: "He is in trouble; he must be helped; but if I am awakened I shall forget all. What shall I do?"

She reflected on the problem and hit upon a plan. She took off a finger ring, as was her custom whenever she desired to remember anything, and her face showed a strong resolution not to forget the meaning of that act.

"You must not think about that," I said.

"If I want to think of it, you will not hinder me"—and she made pretense of not caring about the matter, in order that I might not prevent.

Some minutes later I mentally gave her the order to forget the project. That instant she suddenly withdrew her hand.

"Do not touch me," she said, "for I feel my thought is leaving me."

"It will leave you anyhow," I said, and made a few passes to make her sleep deeper.

"Do not put that out of my head! Oh! you have no pity. What was I thinking of just now? I wished to remember something. I have quite lost it." A few minutes later I noticed on her countenance tokens of renewed mental action. The sleep was become less deep; the thought had come back to her, and again she strove to evade my influence, requesting me to wake her as slowly as possible "for fear of a paroxysm." I awakened her very gently, suggesting cheerful thoughts on her coming out of sleep. Once awake she became pensive and put her hand to her forehead.

"It seems to me," she said, "that there is something I have to remember, but I don't know what." She examined the ring again and again. "No, I do not remember anything."

She was cheerful and talked freely with us.

Here are two more experiments *in the waking state.*

20. What is it I want this moment?	It is true, you want something. She looks round about as if seeking something. Then peering into my eyes, says: "You want a little wine for tea." Correct.
21. And now? (My wish was that she might take a cake.)	No; I know nothing any more; I feel nothing.

December 28.

Endormed in the morning, she recalls her memory of yesterday, and tries once again to fix it in her mind. She finds a new means of doing this. Suddenly she uttered an exclamation—a phrase that could not be understood by us, but which, when recalled at waking, would call up in her mind the plan contrived the evening before. Then, to guard against an influence, she stops her ears and begins to mutter so as not to hear me.

22. I give her mentally the order to forget. She thinks she has won and asks to be awakened slowly. I awaken her. The mnemotechnic phrase is repeated to her. "What does it mean?" I asked. "I do not understand it all," she replied; and she thought no more about it. In the evening she had a slight attack of delirium. She had an hallucination that she was a dead person. The attack ended in a general contracture: this I suppressed. She then fell back upon the cushions and remained motionless.

23. Get up and come to me!	She stirs a little. Result=0.

At this moment she was in very profound sleep (paralytic aideia). She does not hear me unless I touch her.

24. I want you to hear me !	She hears the "noise" of my voice, but does not understand.
25. Ditto. I excite the ears a little by movements of the fingers, which usually produce hyperacusia.	Same imperfect result. I cannot make myself understood. At last, after several minutes, she hears me clearly.
26. I now purposed to make her hear the voice of Miss * * *, which she does not hear of her own accord. (Puységur's experiment.)	Result = 0.
I touch the hand of Miss * * * while she is speaking.	She hears the voice like a whisper, or rather as pretty loud sounds, but not understandable. She hears the voice without my touching Miss * * *. Again I touch Miss * * *, but the patient does not hear the words spoken.

These experiments were probably spoiled by the patient's inconstant and pathological state. After some minutes :

27. Give the other hand ! (I was holding the left).	The right hand stirs. (It was in contracture.)
	She raises it a little.
	She stretches her right hand toward me with much difficulty, "for it is stiff." She gives it to me, then falls back on the pillow very much fatigued.
28. Ask what I want ! (This without touching.)	Result = 0.
What is it? What do you wish to say? (Aloud.)	Something urged me to put a question—I don't know what—I have forgotten. Things are all mixed in my head.
29. Open your eyes and awake !	Result = 0.
	She moves her head to right and left, then the right arm, but does not awake.

At this moment she was absorbed by a *somnambulic reverie*, which reduced the sensibility. I tried to awaken her by spoken order, but the result was only a fatiguing drowsiness, and after several minutes I was obliged to have recourse to passes.

December 31.

The patient is feeling well. I produce easily whatever states I wish, and halt at a phase intermediate between lethargy and monoideism. She hears me, but me only, and she cannot answer save by signs or by detached words.

30. Get up, go to your brother, and kiss him !	She gets up.
	Moves toward me, then goes back toward her brother.
	Stops before him, hesitating, goes slowly up to him and kisses him on the forehead with a start.
Why do you start ?	Because it is something *strange*. (She loves her brother dearly.)

There was a serious paroxysm that evening; she gave herself several cuts on the temple with a knife. I came in time to prevent suicide, and endormed her with much difficulty. She did not recognize me. She begged my pardon in somnambulism, at the same time complaining that the knife was not sharp enough.

The normal state did not return till after two hours of sleep. The hysterepileptic seizures do not recur any more, but the paroxysms of mental alienation and the fainting-fits are still frequent.

January 6.

The patient was lying on the couch and heard nothing. I went out noiselessly to make an experiment at a distance.

31. Get up and be seated till I come back !	She frowns, her respiration grows rapid, but she does not move.

The experiment had lasted hardly a minute when it was interrupted. She was not very well, so I gave up the experiment in order to attend to the patient.

January 10.

I endormed the patient by passes at a distance, that is, without touching her. Then I try to

32. Produce deep natural sleep in artificial somnambulism.	Some seconds after the beginning of the mental action, I hear snoring, the lips open and so remain.

A few minutes after, this state ceases. I begin anew.

33. (As above.)	Same signs, *minus* the opening of the mouth.
Open your mouth !	She opens her mouth and sleeps; respiration rapid.
Close your mouth !	No action, probably because her sleep was so deep

She slept well the whole night.

January 11.

State of aideic lethargy, with tendency to contractures.

35. Extend the right arm.	Right arm stirs. Same phenomenon seven times consecutively. Slight movement of left arm. She rises partly. Falls back. Extends the right arm.

At this moment she hears me, but finds difficulty in answering me.

She recognizes an object belonging to me among four like objects, pointing it out as "best known." (She sees it now for the first time, but so she always speaks of what belongs to me, what I have touched, or concentrated my thought upon.) She rejected one object among five that were alike—the object rejected belonged to Miss X., whose presence is to her insupportable. Three different fingers touch her, she recognizes mine; and so on. She asks for a drink, and some one puts a glass of water to her lips; but she notices nothing and keeps asking for a drink. If I hold the glass she recognizes it at once, and drinks with pleasure. (This phenomenon is of daily occurrence.)

January 14.

Mrs. M. falls asleep with difficulty, but her sleep is exceedingly deep. Even after half-an-hour she does not hear me. There is no contracture. The head is not very hot. The members are not cold. The pulse is pretty regular, 80 pulsations. From time to time some slight tremor of the fingers. The nervomuscular superexcitability does not exist. The members retain the posture given them. Consequently there is a state of cataleptic aideia.

36. I wish you to hear me.	No action. A minute later several fainting spells.

Because of the pathological state, no conclusion is to be drawn from this check in the state of cataleptic aideia. Little by little she passes of her own accord into the *somnambulic delirium.* An hour later, acting more powerfully, I brought about a calm somnambulism.

37. Sleep well the whole night!	She does sleep well the whole night.

She awakes quite well, barring an amblyopy that soon passed away.

January 18.

The improvement in Mrs. M.'s health permits me to make a few new experiments. I endorm her as usual. Then I endormed her brother also, and he remained motionless in an armchair in the middle of the room. He was in a state of mild paralytic aideia, easily effaced, but from which he could not come out by himself. Mrs. M.

lay on the couch at the lower end of the room, in passive somnambulism. By means of a few passes I put her into a deeper sleep—a little too deep even—and I withdraw to begin the experiments.

38. I order her mentally to kneel in the middle of the room.	Result = 0.
	She stirs. (Afterward she said that she was sleeping very well, when something awakened her.)
	She gets up and walks toward the middle of the room, where she encounters her brother. This time she does not start at all; on the contrary, she feels of him with a certain satisfaction and a little astonishment.
I take hold of her hand.	Then she goes back to the couch and sits down.
Kneel !	After two minutes of hesitation she kneels.

She told us afterward that it was her brother that had put her "off the scent." "I knew not what to do," she said; "I sensed you here and there. That confused me. There was 'another you' in the middle of the chamber."

"'Another me?' How is that?"

"Something that was you. I don't know. But that confused me."

January 24.

She was put to sleep in the armchair (*aideia*, then *monoideism*).

39. Ordered to blow out a lighted wax candle on the piano.	She rises.
She stands so near to the candle that I blow it out myself, lest her gown take fire.	Comes toward me, then goes toward the piano.
	Touches the music as she gropes.
Give me the candle '	Removes the candlestick.
	Takes the candle out of the candlestick and brings it to me.
40. Give me your left hand ! (I held her right.)	Raises the left hand and gives it to me.
41. Come to me.	Frowns.
(This experiment was performed with many precautions; the somnambule was not aware that I had retired and was acting, at a distance of several yards, from the rear end of the hallway)	She rises.
	Extends the right arm, advances, opens the door, and goes straight into the hallway, where I hasten to meet her.
	She showed pleasure in encountering my hand, then she returned slowly to the drawing-room.

That same evening I made two experiments more, to test my personal magnetic action.

As I have already said, whenever the patient touched a "strange" object or person, *i. e.*, outside of my influence, there was a start and an instinctive repulsion. This I wished to verify. I requested her brother to take, unnoticed by her, a seat not far from her, a little behind where she was. Then, by exerting an attractive action upon her arm, I so guided her that she by chance touched the arm of her brother. There was a shudder of repulsion, and a repetition of the experiment gave the same result. Then I endormed the brother, unknown to the subject, where he sat, and began the attraction again. She was obliged to touch her brother several times, *but no more repulsion was shown.*

Another comparative experiment was made during normal sleep. Three hands, of three different persons, were brought within a few inches of her head. After a minute she became slightly agitated, raised her hand above her head, as feeling for something, pushed away the other two hands, and drew mine to her. Almost immediately the natural sleep was transformed into somnambulism. Not knowing that I was there, she was astonished to see me near her

February 4.

On awaking she showed, as usual, her sensibility with regard to the psychic state of those present. "I am very angry at Marie," she said. "Why so?" "Because all the time she has been trying to keep me, and it is absolutely necessary for me to go." (That was exactly so.)

February 5.

The hysterogenic point beneath the left clavicle no longer exists. But she does not yet feel the warmth of my hand at the back of the head (delirogenic point). In somnambulism, her sensibility is already normal. Magnetization checks the beginning of a paroxysm of delirium. Aideia, 82 pulsations. After thirty minutes of this state the head grows cooler. A few minutes later passive somnambulism appears, and then active somnambulism. Then she asks me to awaken "her whole body except the front of the head." In this state she manifests a very high degree of sensibility. She notices everything, but feels a difficulty in reflecting. *If one pinch me, or strike me, it hurts her.* She describes perfectly my mental state, or rather my sensations. The touch of a stranger is still disagreeable to her. I give myself a pinch. "I do not like that," she said.

In general she is not obedient in this state, in spite of the transmission of sensations; she is too irascible for that. She undergoes the influence of my sensations, but not of my will. The memory persists.

After an hour this state disappears and she falls into her normal sleep.

Here I stop. The history of this patient has been most instructive to me. I have with regard to her case a great volume of notes taken on the spot, and having a bearing upon sundry other questions, among which the question of therapeutic holds the foremost place. Next comes the question of mental suggestion, that of physical action, that of hypnotic phases, and a few others of less importance. I have purposely left out whatever was not directly concerned with psychic transmission, so as not to complicate the task of the reader, who will find here quite enough if he will but study with the necessary attention the details given above.

I have left out nothing—quite the reverse—that had to do with our principal subject. I have given *all* the experiments, even those which of necessity had to be inconclusive and resultless, or which could be successful only in part, because of accidental circumstances. Hence, the general effect of this narrative will be less conclusive for the reader than for myself. As for me, I am free to confess it, these experiments were decisive. At last I have the *personal impression* I sought so long, of a true, direct, indubitable action. I was fully sure that there was neither chance, coincidence, nor suggestion by attitude or gesture, nor any other possible cause of error. Wherever these influences were for a moment added, I have pointed them out, and the reader will himself be able to appreciate them in accordance with the principles already set forth. But a point that may have escaped the reader, just because of the strictly objective manner of this account, is that from the second week forward I was already master of the phenomenon, and that if in the subsequent experiments there still were checks, that was solely because I wished to verify the impossibility or difficulty of success in certain hypnotic phases. Whenever I produced the phase of sleep favorable to these experiments, they were always successful. The reader will not wonder that I was delighted with this discovery. For me, a phenomenon is not a scientific fact if one is obliged to accept it purely and simply as an accident distinctly seen, clearly controlled, but which has come about one knows not how, and which is not repeated one knows not why.

And that was just the case with all the experiments in mental suggestion hitherto known, even with those cited in the first two chapters, and which so astonished me. Mr. D. divined several letters, and even whole words, one after another, under pretty stringent conditions. But what annoyed me was that after a series of amazing successes, there were other series in which the transmission seemed absolutely in default. And yet the subject kept on divining, and divined amiss, wholly amiss. Why? I could not tell; but this inconstancy of the phenomenon discredited in my eyes results the most astonishing. This all the more that on some occasions I succeeded in mentally representing to myself the object with great

distinctness. For example, I represent to myself a *lamp*, and I almost see it flaring before the eyes of my imagination.

"It is a *book*," says the subject. Seeing that I do not confirm this conjecture, "No," says he, "it is a cigar."

Is not that enough to disconcert a skeptic, particularly one but little prepossessed?

Well, I now understood this unevenness, this inconstancy of phenomena: Direct mental suggestion is possible only in one state, and that a transition state between two others. Though I was able to fix that state for a few moments, by graduating the sleep almost at will, that was not possible to do in the waking state, wherein each moment brings *change*, without which, as Bain very well says, there is no consciousness, and wherein this change, as such, is not appreciable for the subject. Thus it sometimes happened that Mr. D. would say to me: "I feel well disposed to-day." Yet the experiments would be unsuccessful, while on another day they would proceed far better, despite his untoward presentiments.

All was now comparatively clear to me; we must regard thought-transference as a sort of *audition.*

One does not hear who is deaf; one does not hear when there is too much noise; one does not hear when one is absorbed in thought.

One is deaf to a transference of thought when one sleeps so soundly that the brain does not perform its functions. How, think you, can a subject sunk in *profound paralytic aideia* obey your thought if he cannot even hear the living voice? He is deaf. In vain will you shout into his ear, *a fortiori* in vain will you whisper to him from a distance. Hence mental suggestions are still more difficult in this state of profound aideia than in the waking state, and therefore those who think that all that is needed in order to make one amenable to their mental action is to put one into the magnetic sleep, are mistaken.

One does not hear when there is too much noise, and a *hypnotized* subject will not "hear" your thought because he is at the mercy of everybody; because he has too many strong and different sensations; because his attention is not directed solely to you. Consequently, even though you were to make him hyperæsthesic in every possible way by fixing the gaze on a shining object, or other inanimate object, you will not make him easily sensitive to exceedingly slight *personal* influences, such as thought-action.

One does not hear when one's mind is occupied by other thoughts, because the one action excludes the other. One that is talking hears badly. The dreams of *active somnambulism* being more vivid than those of normal sleep and being nearly always "spoken" dreams, are more opposed to delicate perception than is the waking state itself. Consequently, it is useless to attempt direct mental suggestion with a somnambule that is talking with vivacity, or who is carrying out any

somnambulic project whatsoever; he will not hear you. His attention is not null, as in an hypnotized subject; but what is worse for your purpose, it is turned in another direction. Hence, despite the favorable appearances—for he can always hear you, his magnetizer—the state of *strongly active polyideia* is no better for experimental purposes than that of paralytic aideia.

Then, as regards the intermediate states: Some subjects who are capable of presenting these two opposite states—aideia and polyideia—do not pass directly, or at least may not pass directly, from the one into the other. They tarry for a longer or a shorter time in the *monoideic* phase. You have before you no longer an inertia, a complete paralysis of the brain; neither have you a reasoning activity more or less like that of the waking state; but you have to do with a brain that concentrates all its functional action, and that cannot but concentrate it, upon a single idea standing alone and dominant. It is dominant, not being counterbalanced by any other thought. It is hallucinational for the same reason and through the vivacity, the physiological vitality, of a brain that has just rested itself better than usually (aideia), and which asks only a chance to work. Hence you need but little to set it a-going. A nothing moves it, a nothing controls.

That is the moment for suggestions. Mental suggestions? Yes and no! This state is still far more complex than it seems to be. The monoideic state, in the first place, may be two-fold—*active* or *passive*.

When active, it approaches polyideism while remaining what it is. It is akin to it by a very great preponderance of one idea *associated with a few others that are very faint*. This is the state of *somnambulic monomania*. The subordinate ideas belong to the real world, the dominant one to imagination. Consequently the subject cannot make his way so well amid the surroundings of actual life as can an active somnambule proper, who reflects, perceives, shuns obstacles, and performs a difficult task. But if he sees (imperfectly) any object, his dream may easily persuade him to believe it a book, a lantern, or a bird, and then he will do a certain number of acts meet to such vision.

This state, the state of spontaneous hallucination, is no more favorable to thought-transference than is active polyideism, whereof it is only a lower grade as regards lucidity, but more advanced and more isolated as regards liveliness of sensations.

Passive monoideism, on the other hand, comes nearer to aideia, just because of its character of passivity, inertia. The vividness of sensations is the same. But *they can no longer arise of their own accord;* they must be suggested, and they are suggested with the utmost ease. Whatever you say is law to the subject. He is under obligation to divine as you bid him, and the divination is done, not by reflection, but by unconscious, imperceptible associations which deceive you,

which appear and disappear almost before their task is done. For this state is, so to speak, still more monoideic than the preceding one. The faint, accessory ideas are almost entirely wanting. And it is always a state of tension, even violent tension, like the other, with this difference, that the tension of active monoideism comes into play of itself, while the tension of passive monoideism always awaits an external stimulus however slight—a breath, a hint, a nothing. Bain would say that it is an "involuntary energy" requiring only an impulsion to show itself.

Is this the phase for mental suggestions? Almost! Anyway, mental suggestions *always act* in this phase, that is to say, you have only to concentrate your thought strongly and the subject will perceive it. There will be first a corrugation of the eyebrows, an expression of attention in the countenance, an agitation of the members, and at last a doing of your will, or a beginning of doing it. One thing, however, may mar the experiment: if your action is too lively in the beginning, or if it is too vividly (albeit indistinctly) perceived by the subject, it will have upon him an awakening influence—awakening in the relative meaning of the word, viz., the subject, though he executes your mental order, and because of the same, will pass too quickly into a state of sleep a little less deep, into *active monoideism*, and then will be all eagerness to execute your mental order without having grasped it fairly; he will seek you, will run after you, and will even "insensibilize" himself[1] by this involuntarily suggested monomania. Or else he will pass into a state of sleep still less profound, more tranquil, and at the same time more lucid, a state of *active polyideism;* he will begin to divine, to guess by his own reflection what he can no longer perceive passively, and then he will be capable of doing other things than you have ordered. Finally—and this happens seldomer, but does happen with subjects that are too sensitive—the mental impulse you give him produces first excitation, after the manner of narcotics, and then puts him to sleep; and the subject, after making a beginning of carrying out the order, lapses into complete aideia. Thus this state does not afford us the best guaranty of success; for that we must seek a little deeper.

The true moment for mental suggestion is *the state betwixt aideia and passive monoideism.*

But if that is so, and if our experiment has a better chance here than in outright passive monoideism, the cause is simply that it has more time at its command, and that one usually makes too great an effort in beginning the mental action—a thing helpful this side the threshold of aideia, while beyond that it is not safe. Could we be certain which stage we had before us, we should have only to conform

[1] *S' insensibilisera /* that is, *will make* himself insensible [to your further action]. —*Translator.*

to its requirements; we would act with some forcefulness in aideia (to awaken the brain), a little more gently in monoideia (not to awaken it too much), and we should have free scope up to the very limits of both states. In any case the brain should be "regulated;" it should be regulated for *nascent monoideia*. Permit me to illustrate by a comparison with the telephone.

A telephone, unless it is well regulated, does not reproduce distinctly speech at a distance. But in telephony, as in neurology, all is relative. A telephone is well regulated when the vibrating disk is very nigh, but not too nigh, the magnetic core of the coil; you may then shout pretty loud without impairing the distinctness of the sounds transmitted. On the contrary, the louder you shout the better they hear at the other station. And they would hear better still, comparatively, were the disk still nigher the core, almost touching; but then, in speaking too loud there is danger of the disk sticking to the magnet and of almost complete failure to transmit. *Medium regulation bordering on maximum* is what practice requires, herein differing slightly from theory.

But how "regulate" a somnambule? Ah, that is the question! Fortunately, it is not much more difficult in hypnology than is that other question in telephony; only here as there the instrument must be *regulable*.

Subjects there are who will not be controlled in this respect; they can be employed for other purposes, or with them one has to be content with a hurried mental action, as has been done hitherto. But we must also eschew subjects that are too obedient and already trained—subjects worked by turning a crank, so to speak. But again one must learn how to bring about the degree of slumber that is needed. The first seances, however, must have for their one end purely passive observation of the effect produced by your action, *in order to learn what kind of a subject you have*. You shall spend hours, if needful, waiting for the subject to awake of his own accord, unless he asks to be awakened sooner. In subjects that are specially susceptible of sleep—for some there are with whom you can make all the physical experiments, but not the psychical—you will produce two principal phases, namely, the *deep sleep*, which vanishes by degrees, and the *lucid sleep*, or somnambulism proper. What you need is an intermediate state. The subject must not be allowed to become too much awake and to regain his spontaneous activity, nor is he to be put in too deep a sleep, for then he will not hear you. The best means to obtain this graduation is by *magnetic passes*, so-called, up-and-down and crosswise, for the depth of the slumber usually increases with the number of those, and lessens with the number of these. By making two, three, four passes right before the subject (without contact) you obtain a little less or a little more of sleep, and sometimes

one is able to graduate at will the intermediate phases just mentioned. Should such graduation by passes be impossible, you will have difficulty in obtaining that result by any other means. And above all one must be careful not to employ different means for the different phases, for so one establishes an artificial ideorganic association, a bad habit that will disorganize the subject.

It is understood that I do not enter here upon a discussion of the action of the passes. One may suppose that they exercise a physical action, or one purely suggestive : that is of no importance for the end in view. I simply mention the oldest and best known process, which gives the most constant and most beneficial results as regards the subject (certain hypnotic processes are harmful) and which serves best to graduate the sleep at will whenever graduation is possible.

Once master of your subject, you have only to avail yourself of the moment when *he hears you and does not yet give answer well.*

Do not mistake difficulty of speaking, caused by a contracture of the voice-muscles, for an aphasic difficulty, *i. e.*, one of purely cerebral origin. The latter is what you require.

We will enter on some further details when we state the conclusions of our study.

CHAPTER IV.

EXPERIMENTS AT HAVRE.

IN the month of November, 1885, Mr. Paul Janet, of the Institute, read to the Society of Physiological Psychology a communication from his nephew, Mr. Peter Janet, professor of philosophy in the Lyceum at Havre, entitled " Upon Some Phenomena of Somnambulism." This title, prudently vague, veiled some quite extraordinary revelations. The subject was a series of experiments, made by Messrs. Gibert and Janet, that seemed to prove not only mental suggestion in general but also mental suggestion from a distance of some kilometers, and unbeknown to the subject.

That I followed the reading of this communication with interest was matter of course : everybody did the same, not without a good measure of incredulity. Mr. Janet abstained entirely from theorizing ; he simply stated the facts, and left them to be believed or not. The communication, listened to in silence, was passed in silence, save that a few exceptions, of a very general character, were taken by our President, Mr. Charcot. Positively there was no ground for argument, but one might examine the facts. Having decided to do this. I took the first favorable opportunity to carry out my purpose.

True, I had already made many experiments in mental suggestion,

and on that point I no longer had any doubt : I must needs surrender to evidence. But the facts recounted by Messrs. Janet and Gibert presented quite another character. These gentlemen carried out no experiments like those we have been observing in the case of Mrs. D. in the waking state and of Mrs. M. in the state of sleep ; they tried, but without success; whereas they did attain success under more extraordinary conditions, giving mental suggestions to be carried out much later, and endorming their subject at a distance.

To me this seemed noteworthy. I wished, first of all, to verify this latter phenomenon, recognizing its importance for a theory of suggestion and for the problem of magnetism in general. It was evident that such verification would be the death of the exclusive theory of contemporary hypnotism, which was boasting itself to be the legitimate successor of animal magnetism, deceased, and destined henceforward to take a very modest place alongside its predecessor. On the other hand, should Messrs. Gibert and Janet have been duped by any illusion, we must once again retrace our steps to see if even suggestion from anear be not due to some presently incomprehensible exaltation of the perceiving mind, and not to thought-transference in the true sense of the word.

The subject of these experiments was Mrs. B., a countrywoman of Normandy, 50 years old, in good health, honest, very timid, intelligent, but quite uneducated (she cannot even write and can hardly read). She is of robust, sturdy constitution ; when young was hysterical, but was cured by an unknown magnetizer. Since, only in somnambulism do some traces of hysteria appear, when she is crossed. In the normal state, the hysteria has disappeared, but the hypnotic sensibility that served as its ground persists, as usual. Mrs. B., ever since childhood, has been subject to natural somnambulism, in which she recounts the singular hallucinations she experiences. The somnambulism recurs more frequently of late. The woman has a husband and children, who enjoy good health. Several physicians have, it seems, wished to experiment with her, but she has always rejected their propositions. Only at the request of Mr. Gibert did she consent to spend a little time in Havre. She is endormed very easily : one need but take her hand, grasping it gently for a few moments, *intending to endorm her ;* otherwise there is no result. After a longer or shorter time—2 to 5 minutes, *according to the person that puts her asleep*—her look becomes vague, the eyelids quiver with slight motions that often are very rapid, till the eyeball hides itself behind the lids. At the same time the chest rises laboredly : the subject is evidently ill at ease. Very often a shiver agitates the body for an instant, then she gives a deep sigh and throws herself backward, plunged in deep sleep.

Hypnoscopic exp.: anæsthesia, *general* contracture almost instantaneous, *deep sleep.*

I reached Havre August 21, and found Messrs. Gibert and Janet so convinced of the reality of the action at a distance that they willingly assented to the minute precautions suggested to them by me so that I might be able to test the phenomenon.

Mr. F. Myers and Dr. Myers (members of the London Society for Psychical Research), Mr. Marillier (of the *Société de Psychologie Physiologique*), and myself, formed a sort of commission, and the details of all the experiments were arranged by us with common accord.

The precautions we observed in experimenting were as follows:

1. The precise hour for the action at a distance was fixed by lot.

2. It was not made known to Mr. Gibert till a few minutes before it arrived, and forthwith the members of the commission went to the pavilion.

3. Neither the subject, nor any occupant of the pavilion,[1] distant nearly a kilometer, knew the precise hour, or even the kind of experiment that was about to take place.

4. To avoid involuntary suggestion, neither we nor any of those gentlemen entered the pavilion except to verify the sleep.

First Experiment.—Dr. Gibert must endorm the subject from his office, 51 St. Quentin Street, and mentally order her to go out into the street. Action begins 5:50 P. M. Probable time of executing the order, 6:05.

At 6 o'clock precisely we reach No. 5 Ferme Street, where the pavilion is, but we stand aloof, so that no one might suspect our presence. We wait a quarter of an hour in vain; the subject does not come down into the street. Consequently the experiment was a failure in that respect.

We enter the pavilion, ringing the bell at the garden gate, and go up to the first floor, but find no one there.

Two of us go down to the kitchen, on pretext of inquiring whether Mr. Gibert has yet arrived, and find the subject sitting motionless but *awake*. We pass to a chamber on the first floor, and there talk about the experiment, which we regard as abortive. A few minutes thereafter the subject enters the parlor (opposite to the room we were in), and there we find her reclining on an easy chair in *lethargy*. That, it seems, is always the case when she is endormed by Mr. Gibert. Dr. Gibert is at this moment making his professional calls, and cannot join us.

The subject makes answer to questions put by Mr. Janet, who of late has been endorming her more often than Mr. Gibert.

Mrs. B., in somnambulism, tells of how toward six o'clock she felt ill at ease, and was about to go to sleep when a ring of the bell awakened her, and she took refuge in the kitchen; how thereafter she

[1] *Pavillon:* the house at which the subject lodged.

was unable to overcome the drowsiness, and so went up to the parlor. "'Twas Mr. Gibert played me that trick," she added; "you torment me; I don't want folks to endorm me without giving me notice!"

We profit by the somnambulism to make some experiments, which the subject interrupts continually, asking "Where is Mr. Gibert? Where is he? I must go and look for him." She tries to get away from us and go into the street. We hold her back.

After an hour we withdraw, and Mr. Janet awakens her. She recollects nothing, but she has headache, and at evening we go away; she is all the time restless, falls of her own accord into somnambulism, and goes down into the garden seeking Mr. Gibert. They hold her back with difficulty, and send for Mr. Gibert, who comes and quiets her.

Despite these unfavorable conditions, another experiment was arranged, to come off at 12:15 that night. Mrs. B. was sure to be then in her natural sleep.

Second experiment.—"From a distance to make Mrs. B. pass from her natural sleep into somnambulism and go find Mr. Gibert in his office in St. Quentin Street."

The success of this experiment, even according to those gentlemen, was hardly probable. Besides, this was the first time they ever tried to act during the subject's natural sleep. So it failed; the somnambule did not come down stairs; and, as we did not wish to disturb the inmates of the house, we did not go in to see whether there were any indications of action. So much at least is certain, that Mrs. B. did not leave her chamber. The only difference noticed in her behavior on this day as compared with other days was, that instead of rising very early as her custom was, she slept till after ten o'clock, and she got up with a headache. She went down to the kitchen and set herself to work, but, the headache continuing, she went again up to her chamber toward noon.

Then came the *third experiment.* Mr. Gibert was to endorm Mrs. B. from his own house at 10 minutes before 12 o'clock, exerting mental action during 10 minutes. Mrs. B. was to be endormed and to remain in the parlor. At 12.07 we reach the pavilion without ringing the bell, and taking care to make no noise. Mrs. B. is still in her chamber. So as not to influence her by our presence, we send the cook to her to ask if she is coming down to breakfast.

Mrs. B. is walking briskly up and down the room. "I am in a queer way," says she to the cook; "I don't know what ails me. I am trembling; but I will go down all the same."

She did not come down till 10 minutes afterwards. We watch her from a distance. She is not quite endormed, but neither is she in her normal state. She seems not to see what is going on around her nor

to know what she wishes to do. She enters one room and then another ; a minute later she falls into *lethargy*.

The same questions, the same answers. "Again it is Mr. Gibert that plays this trick upon me. But I have made you wait (smiling). *I have had time to dip my hands in water*, and that kept me up for some time. But where is Mr. Gibert? Why does he not come? Why torment me so? I must go and look for him (applying both hands to her forehead). No ; he does not want me to go in search of him (fretfully). Why doesn't he wish me to go?"

Sundry experiments are made, in the course of which I remove her headache.

Mrs. B. recognized all the persons present by touching their thumb, and particularly by scratching lightly the thumb nail. There was no getting an explanation of this trick, which to her seemed quite natural. She would not even tell us how she hit upon it. I can only say that in this way she perceives really the personality, the physical state, sometimes also the mental state of people. After touching my thumb she declared that I should have great influence over her and that I might easily control her. "For example, I should not dare to say *no* to you," said she ; and so on.

Thenceforward she seems really to feel my presence, and to be subject to a sort of attraction for me. Wishing to test the reality of this influence, I concentrate my thought and order her to give me her hand ; suddenly I see her start ; she grows excited, leans toward me, and holds her hand out to me. Thrice I made this experiment with the same success while she was in a state more or less proximate to monoideism. When she was in the *aideic state* the effect was null, retarded, or incomplete; she became agitated, but did not execute the mental order.

In *active somnambulism* the experiments were sometimes successful, if I took care to select a moment of inaction. In acting while she talked animatedly with Mr. Janet or another person, or when she was absorbed in her own thoughts, I obtained no result, absolutely none. I had also occasion to notice that too great concentration of my own thought rather marred the result of the experiment ; it upset her, producing spasms and general tension, interfering with the exactness of the transmission. On the other hand, a thought formulated with precision but, so to speak, in passing and without special mental pressure, produced an action whenever the subject was amenable to those mysterious influences. Here are two experiments made under this condition of tension, which were unsuccessful.

I was at the lower end of the room, hid behind Mr. Janet, and I ordered the somnambule to kneel. She manifested strong agitation, seemed to be looking for me, her eyes opened and remained open without intelligence. The state in which she was at this moment was

like that produced by Donato when he makes his subject follow him. It was thus a state of fascination, with a noteworthy difference, however. The state of fascination is a monoideic state. It is passive, eminently passive, when you hold the subject fast with your eye, operating upon him as you please. This state is sensitive to visual influences, to the imitation of gestures, etc., when it is calm. If, on the contrary, the subject, drawn by your eye, follows you, the calm disappears, a sort of fever seizes him, his thought is too absorbed, too tense in one direction to allow new influences to act; the subject follows you madly, he is infuriated by the slightest obstacle, and then he can do nothing but follow your eye with blind obstinacy. That is not passive monoideia, it is active monoideia, *hypnotic monomania.*

Acting mentally at a distance and unseen by the subject, I produced a state like this, but more agitated and less clearly defined, less fixed, the fixity of gaze being lacking as a support to the monomanial tendency of the subject. She was, therefore, upset, agitated, attracted, but indistinctly, and her mental state, which asked only to be dominated by one thought, was at the same time too much on the strain to grasp it. It was an almost aideic fever, because of the mingling of indistinct ideas.

The subject began with rising to her feet; then I thought I noticed a bending of her body as though she were about to kneel; but this movement ceased and Mrs. B. straightened herself and for a moment remained standing. Then I changed my thought and ordered her to come to me and then to go upon her knees before the easy chair. She stepped tottering toward the chair. At that moment I pronounced mentally the words "Kneel!" "On the floor!" The latter expression caused me some uneasiness and I regretted it. "Perhaps she will fall to the floor and hurt herself," I thought; so I began anew the mental order, "Kneel!"

At that instant Mrs. B. fell backward in lethargy into the arms of Mr. Janet.

Another experiment, suggested by Mr. Frederic Myers, also failed, The somnambule was to take in her hands a cushion placed to the left of her on the couch. This experiment took a good deal of time, for the different states of the subject succeeded one another rapidly. At times there was no action; at times the feverish monomanial agitation interfered with the distinctness of the transmission. Mrs. B. stretched her arms forth toward the cushion, but did not take hold of it. At last she rose, went to the end of the couch where the cushion was, paying no attention to it, and *went down upon her knees*—thus executing the order she had failed to execute when given before, *and which I was not then thinking of.*

But, I must add, there is no certainty that in this case we have a retarded mental perception of the first order; for, inasmuch as I

considered the first experiment a failure, I said to the gentlemen present that I had chosen that injunction rather than another, expressly because it had not succeeded definitely with my former subject. At that moment the somnambule was in lethargic aideia and could not hear us; but we must never trust this hypnotic deafness, for though it is absolute as regards reflex action, it may be that it does not exclude latent, unconscious audition, and this may manifest itself in a subsequent state. I may even say, I think, that the habitual overlooking of this fact by experimenters does a great deal toward making their observations inexact.

Finally, a third trial, in which she was ordered to give her right hand while I was on her left, was only in part successful. There was a motion of the right arm in the direction of me, but the hand was not given.

It is to be remarked that all these experiments were made by me without my touching the subject, who never was magnetized by me. She was at this moment under the influence of Mr Gibert (absent), and of Mr. Janet, who awakened her at length, not without difficulty

Fourth Experiment.—On account of the patient's fatigue, it was about decided to suspend experiment till the morrow; but not being satisfied with the first three, I urged Mr. Gibert to allow an immediate repetition of the second, which had failed (Cagliostro's experiment—endorming the subject from a distance and making her come to him across the city).

It was half-past 8 in the evening. Mr. Gibert consented. The precise time was chosen by lot. The mental action was to begin 5 minutes before 9 and to continue till 9.10. At that moment there was no one in the pavilion, besides the subject, but the cook, and she did not expect that anything was to be done by us. No one went to the pavilion. Profiting by this absence, the two women went to the parlor, and amused themselves with playing on the piano.

We reached the neighborhood of the pavilion past 9 o'clock. Silence. The street was deserted. Without making the least noise, we broke up into two parties to watch the house from a distance.

At 9.25 I saw a shadow appear at the garden gate. It was she. I hid in a corner to listen without being observed. But I heard nothing. The somnambule, after waiting a minute at the gate, went back into the garden. (At this moment Mr. Gibert was no longer acting; by dint of concentrating his thought he had a sort of syncope or stupor, lasting till 9.35.)

At 9.30 the somnambule appeared again at the gate, and this time sprang into the street unhesitating. She hurried along like one who is late, but who must positively reach his destination. The other gentlemen, who were on her route, had no time to notify us—Dr.

Myers and me ; but, hearing rapid footfalls, we followed the somnambule, who noticed nothing around her ; or, at least, did not recognize us. Reaching Du Bard Street she began to stagger, halted a moment, and came near falling. Suddenly she started forward again at a rapid pace. It was now 9.35. (At this moment Mr. Gibert, come to himself, began the action again.) The somnambule hurried on regardless of surroundings.

In ten minutes we were quite near Mr. Gibert's house, when he, thinking the experiment had missed, and wondering because he did not see us back again, steps out to meet us. He comes across the somnambule, who keeps her eyes still closed. She does not recognize him. Absorbed in her hypnotic monomania, she rushes to the staircase, followed by us all. Mr. Gibert wanted to enter his office, but I take him by the hand and lead him to a room opposite. The somnambule, highly wrought up, looks for him everywhere, brushing by us, but not noticing anything. She enters the office, feels of the furniture, repeating in a tone of distress, "Where is he? Where is Mr. Gibert?"

Meanwhile the magnetizer was seated, making not the least motion. The subject enters the room, almost touches him as she passes, but in her excitement fails to recognize him. Again she rushes through other rooms. Then the thought occurred to Mr. Gibert to draw her to him mentally, and in consequence of that act of will, or by simple coincidence, she retraced her steps and seized him by the hands.

That moment an insane joy took possession of her. She springs upon the sofa, claps her hands like a child, and cries, "There you are! There you are at last! How happy I am!"

Then she repeats to us her impressions. The two women, Mrs. B. and the cook, were amusing themselves in the parlor, playing and singing, profiting by the absence of the lady of the house. Then, toward 9 o'clock—9 *o'clock*, she said, *lacking two or three minutes*,[1] "being seated on the sofa, I felt a drowsiness coming upon me." "It was you," said she, addressing Mr. Gibert, "that did that to me. I knew these gentlemen were waiting in the street. 'Well,' said I to myself, 'let them wait ; I have enough of this nonsense.' But I could not make a long resistance, and I ran like a crazy woman."

She was able to name the streets she had traversed, but she had "met nobody."

The evening was a very interesting one. After enjoying for a good half-hour the presence of her "dear Mr. Gibert," and felt of the thumb of Mr. Janet, whom she also "loves dearly," she suddenly exclaimed: "And that gentleman—the other gentleman—what's his name? Where is he?" She reaches forth her hand in the direction of me, groping in the air. I give her my hand. She examines my

[1] But according to the cook the parlor clock pointed to 9.15.

thumb after her own fashion, recognizes me[1] with satisfaction, but continues the examination. "What, then, is your name? Mr. Oko—Goro—I don't know." I repeat, mentally, my name, but she cannot yet speak it.

"You are—you are not English. [The first day she took me for Mr. Frederic Myers, which proves that she did not *see* persons.] You are from Paris—but you are not French; you have come only for France—you are from—— What is the name of your country? Bre—— No! Po—— Poland, isn't that it? You endorm many, a good many people. Why? I don't want you to endorm so many people. Listen! What do you do in Paris? [She applies her fingers to her forehead.] A factory, you make ape—apa— how do you call it? Apparatus, isn't that it?"

"What are those apparatus used for?" asked Mr. Gibert.

I thought of telephones, but what came into her mind was the hypnoscope (she had seen one in my hands, but she has never seen a telephone).

"Oh, it works so." Here she imitated general contracture—a reminiscence of yesterday's experiment.

We pass to other experiments, but the somnambule's thoughts are elsewhere, she is preoccupied about me. In vain do I hold my tongue, withdraw, hide; she seems always drawn toward me, and wants to go and find me. She grows angry at Mr. Janet, and says he (mentally) forbids her to keep her thoughts fixed upon me.

Seeing this strange influence, Mr. Gibert proposed that I should take his place, judging that I could obtain results still more remarkable. But I decline. "It is a sympathy," I said, "a somnambulic passion such as we sometimes see, rather than a really stronger influence. I do not know the subject well enough, and, besides, in delicate experiments it is not well to multiply influences. I trust more your conversance with the subject than my personal power. Finally, inasmuch as it is a question of facts that I have not yet verified, and which I am trying to study, I prefer to retain my independence as an observer."

Consequently, Mr. Gibert was requested to continue the experiments and in particular to attempt *transmission of sensations.*

To the end that the attraction that my presence seemed to exert upon Mrs. B. might not become a hindrance, I asked Mr. Janet to suggest to her the thought that I was gone away.

"Mr. Ochorowicz is gone; he will not return. I forbid you to think of him!"

This order, several times repeated in view of the opposition made by the subject, secured for us a quiet time for nearly an hour. During that time she spoke no more of me and I was able to stand quite near her and to watch the experiments.

[1] That is, recognizes that I am the one whose power she lauded.

It was necessary to select the favorable moment for the transmission of sensations, for that phenomenon, as well as mental suggestion in general, succeeds only in an intermediate state betwixt aideic lethargy and regular monoideism. I was glad to be able to verify in this remarkable subject the same *physiological conditions* which were first formulated by me before the Society of Physiological Psychology, January 25, 1886, and which were based upon a detailed study of the phenomena presented by Mrs. M.

Verification of the state needful for transmission was made in the following manner: Mr. Gibert drank slowly alongside Mrs. M. a glass of water. Immediately she exhibited the movements of swallowing.

After this preparatory trial, Mr. Gibert, followed by Mr. Marillier, retired to a remote apartment. On the threshold of the chamber I whisper in the ear of Mr. Marillier: "Pinch his right hand."

Two minutes after, Mrs. B. manifests the signs of suffering sharp pain. Both her hands, but the right in particular, are in a quiver. "Don't," she cried. "Don't do that, wretch."

The second experiment was proposed in writing: "Puncture the middle of his forehead."

In the subject, general agitation, less marked in the arms. The somnambule raises her hands toward her forehead, complaining of the hurt they are causing her, and continually repeating: "You wretch! Don't do that! Wretch!" Her agitation continued for a minute after the return of the two gentlemen.

Then came the last experiment—one that I had never witnessed before—namely, mentally to order an act that was not to be performed till the following morning. At the stroke of 11 o'clock Mrs. B. *was to go to the parlor*, take up a photograph album that lay on the table, open it and examine the portraits. (This order was proposed in writing by Mr. Frederic Myers.)

To communicate the order mentally, Mr. Gibert seized Mrs. B.'s hands and applied his forehead to her's. I stood quite close to them: he made no movement of the lips. He merely attracted the subject's attention by saying, "Listen, Léonie!"

At the moment of transmission Mrs. B's countenance assumed a peculiar expression; one would say she was listening with all her powers of attention. But at the same time it was plain that Mr. Gibert did not act auditive sensations for her,[1] for while still retaining this expression she began to be agitated, to writhe in strong convulsions. There was a true paroxysm of hysterepilepsy, with grinding of the teeth, clonic movements and contractures. After barely two minutes the communication was at an end, and Mrs. B. grew quiet little by little, giving no sign that she knew what had passed.

[1] *N'agissait pas pour elle des sensations auditives.*

Messrs. Gibert and Janet even assured me that she could not tell what was asked of her, *and that orders given in this way to be carried out in the sleep itself had never succeeded.* Hence, it appears that this is a transmission eminently *unconscious*, and that the subject's unconscious requires a certain time to crystallize, so to speak, the impressions received, and to excite the corresponding muscles.

This phenomenon is not an isolated one in psychology. It sometimes happens to one, as he lies abed, that the thought of getting up comes to him, but without sufficient force to overcome his indolence. This thought returns once or twice without result. Then, while his mind is occupied with quite other things, he feels himself raised suddenly, as by a stranger force, and is up with a bound without making up his mind to act.

So, with regard to waking at a set hour. I must take the train very early. I know that there will be somebody to awaken me, and so my consciousness may sleep tranquilly. But the unconscious has received communication of this decision, though the Me did not at all count on the unconscious. So the unconscious watches, is so wakeful, calculates time so exactly, that at the approach of the fixed hour it rouses us and recalls the Me to consciousness.

The following morning, at 5 minutes before 11 o'clock, Mr. Marillier and I were in the garden. The clock struck 11, and we saw Mrs. B. coming down-stairs from her chamber. She enters the parlor, looking for something. She touches several objects, without taking them in hand. She opens the wall closet, and shuts it again. Mr. Janet comes and bids her good morning; she makes reply, and then goes on with her indeterminate task, while walking up and down the parlor. Mr. Janet returns to us, and proposes to us to endorm the subject from a distance, thinking the experiment has failed. I object, saying that Mrs. B., not being quite in her normal state, might fall asleep of her own accord, and that we ought to wait and see what she would do. And all agreed that I was in the right; for, a few minutes later, at 11.30, Mrs. B. takes up an album, then another, opens it, sits on the sofa; and, now visibly quieted, begins to turn the photographs over. As she told us afterward, she was looking for the portrait of Mr. Gibert. "Why?" she was asked. "Because it gives me pleasure to see it." (That photograph had been taken out after it was found that once she was endormed spontaneously while looking at it.)

We go to the parlor and find Mrs. B. still engaged in thumbing the album, but she was in a state of *active somnambulism.* She did not this time say it was Mr. Gibert that endormed her: she did not even know she was endormed.

Naturally we profited by the occasion to make a few experiments. She again touched the thumbs of all present and recognized us easily. Mr. Janet asked her to continue her revelation about me. She

repeated her remarks of the other day: "He has a good deal—I don't know how to speak it—well, he has that which is needed to endorm." "A good deal of will-power?" asked Mr. Janet. "Yes, yes, a will-power—but I don't know how to call it—he thinks well. When one means to endorm me he must think well—else it torments me—some one wants to endorm me and thinks of something else; that annoys me. He has—I don't know—but I should not dare, for instance, to say nay to him—Oh, there! He could make me walk—make me walk into the sea."

"You want to leave us, then—Mr. Gibert and me?" "No; you are mine." "Then forget him!" "I will not." But at last she gives way, and we are able to procced with the experiments.

I have forgotten to say that after the seance at Mr. Gibert's she was taken home in a carriage and awakened on her arrival, so that she retained no recollection of her night-wandering. While on the way home she said to the gentlemen that were with her that *I had something in my pocket which attracted* (the hypnoscope). Wishing to verify the fact I passed the magnet to Dr. Myers, who, according to the somnambule, had no influence over her. He put it in his pocket; while on the other side Mr. Frederic Myers, who was equally indifferent for Mrs. B., had another magnet.

Almost instantly Mrs. B. stretched forth her arms, attracted in two opposite directions. This attraction ceased in the state of active somnambulism, and then reappeared in one of the phases of lethargy that I was unable to define.

But little by little the order to forget me was blotted out of the subject's mind, and she showed again an attraction toward me, though now I had not the hypnoscope in my pocket. She rose twice and wanted to follow me. I went into the garden so as not to spoil the experiment, and Mr. Janet was obliged to repeat the order to forget. Finally, toward 2 o'clock, in the street I stopped the gentlemen to say to them this:

"You know I came to Havre mainly to verify the fact, till then unknown to me, of somnambulism at a distance. Now, the experiments we have made do not convince me. They are acceptable as regards action at a distance, but then they may also be explained by involuntary suggestions. In the first experiment Mrs. B. was not endormed till after she had seen that we were come. The second failed entirely; true, it was performed under exceptional difficulties, but at all events it proves nothing. The third seems conclusive; the subject came across town endormed. But for me there is a serious doubt. Mr. Gibert began the action at 5 minutes before 9 o'clock, whereas according to the cook Mrs. B. seemed to be already endormed 15 minutes before 9. I have ascertained that my watch keeps time with the clock in the parlor, and Mr. Gibert's is regulated according

to mine. Consequently we may suppose that Mrs. B. fell asleep of her own accord some minutes before Mr. Gibert began to act. Afterward she came, it is true, but I saw her at the garden gate, and it may be that she perceived one of us and that this circumstance suggested to her the thought of going out a few minutes after. In short, if we reject the testimony of the somnambule herself, certain doubts arise. To be absolutely convinced, I request Mr. Janet to endorm the subject *now*. The conditions are as perfect as can be. I noticed Mrs. B. from a distance and am perfectly certain that she is in her normal state, without any tendency to spontaneous somnambulism. No one is at this moment expecting an experiment. "Will you try it?"

It was cruel on my part, for we were all both tired and hungry; but I did not wish to go away without a clear conscience, and without being able to subscribe to the report that Mr. Marillier was to make to the Society of Physiological Psychology. Mr. Janet replied that he never had tried to act in the public street, that it would be impossible for him sufficiently to concentrate his thought, and that, on the whole, he preferred that the experiment should be made by Mr. Gibert. But at last he consented, provided he were permitted to act from his own house, *i. e.*, from a much greater distance, but where he would have the necessary quietude. I accepted the conditions, and it was agreed that we should first go to lunch together, to fix the exact time, and then try the experiment.

The matter was arranged as follows: I asked Mr. Marillier to go to the pavilion and watch Mrs. B. He did not act upon her, and so his presence could not have a disturbing effect. He was an *habitué* of the house, and therefore his presence could not awaken any suspicion. He did not know the precise time of the experiment, consequently he could not by his behavior influence the subject at the given moment. The precise time, fixed by lot after the departure of Mr. Marillier, was 4.30.

"We have still a good hour before us, but I'll not let you slip from me," said I to Mr. Janet, laughing. So we went together to take a cup of coffee, and then to have a stroll on the beach; at last, we went back to Mr. Janet's house, No. 3 Robert Alley. I kept up a lively conversation all the time with Mr. Janet, to keep him from thinking of Mrs. B., and so that there might be no excuses if by chance Mrs. B. should be endormed *before* the hour.

At 4.30 I withdrew to the little garden plot of his house, to give him entire freedom of action.

He sat in his armchair, his head between his hands, and concentrated his will so as to order Mrs. B., about half a mile away, to fall into somnambulism. This mental action lasted 18 minutes.

At 4.48 I enter Mr. Janet's study. He puts on his hat, and we go out to join the Messrs. Myers and proceed to the pavilion. Before

entering I asked Dr. Myers to go upstairs alone and call Mr. Marillier down. The latter said he had seen nothing. "All that I can certify," he declared, "is that since my arrival nobody entered the pavilion. As for Mrs. B., she probably is busy sewing in the parlor, but I did not enter the parlor for fear of exciting her suspicions." Before going in, I begged Mr. Janet to permit me to put the questions to Mrs. B. in case we should find her endormed.

Then we enter without ringing, as noiselessly as possible, and notice, through the door of the parlor, which was ajar, Mrs. B. engaged in sewing, but *in active somnambulism.* She did not hear us. *She answered only the questions put by Mr. Janet.*

"Well! You are tormenting me again! Do I look like a fool? It is you that are playing this trick upon me!"

"Perhaps it is Mr. Gibert."

"It is not Mr. Gibert at all, 'tis you."

"When did you fall asleep?"

"Just at half-past four."

"Did you look at the watch?"

"What need to look at the watch? I tell you it was half-past four."

I compared Mrs. B.'s watch with mine. It was 3′ 30″ slow; consequently, if she noted the time correctly, *the effect was produced from a distance in about* 4 *minutes after the commencement of the action.*

"Tell us what you have been doing since we left."

She then told us that first she went down to the kitchen for lunch, that she talked awhile with the cook, and then went up to the first floor to dress; that at last she took up her sewing and suddenly found herself paralysed, so that when the bell rang (on Mr. Myers entering) she was unable to rise.

She did not speak of Mr. Gibert this time as she had done always before.

Another point worthy of notice is that, as these gentlemen assured me, when Mr. Gibert endorms her from a distance, she is always *found in lethargy;* when Mr. Janet is the operator she falls into a less profound *somnambulic* state. The cook confirmed the somnambule's statements.

"Now, then, are you satisfied?" asked Mr. Janet, addressing me.

"Yes; this time the experiment is clear. One thing only I regret —that Mr. Marillier could see nothing. Thereupon we proceed to experiment.

From the beginning of our seances she had shown a certain repulsion toward Mr. Marillier, a purely physical repulsion against being touched by him; yet she would talk with him and show no sign of dislike. We ask the reason of this. She examines his thumb; then, letting go his hand, she says: "He makes me ill. Oh, not me—but —that does not concern you." Mr. Janet insists. Again she seizes

Mr. Marillier's thumb, touches his chest, then her own, with an expression of pain, and makes answer: "I do not wish—that does not concern you." All that can be got from her is that he is ill.

Mr. Marillier took me aside, and admitted that he had an affection of the heart, and but a few days before had suffered a good deal from it. The fact is mentioned in his study on Hallucinations.

With her habitual vivacity—habitual only when she is in the state of active somnambulism—Mrs. B. passes to other matters, amuses herself like a child, touches the hands of those present, always in the same way and with the eyes shut.

While she was holding a lively conversation with Mr. Janet, I made an experiment in mental action. It was without result. At that moment there was hyperæsthesia of the sense of smell, for a cigarette mouthpiece, held some twenty inches away, produced coughing and discomfort.

As she showed such marked impressionableness with regard to me, and as she believed I had left the house, I wished to find out whether she could recognize an object belonging to me. So I remove my cravat and pass it secretly to Mr. Janet by the hand of Mr. Marillier. Being at the moment occupied with other questions, Mr. Janet laid the cravat on the table. A few seconds afterward, the somnambule rose of her own accord, took the cravat, went straight to me, dropped the cravat into my lap, and went back to her place, acting throughout like an automaton. Was this an instance of thought-action on my part? At all events Mrs. B. did not recognize me; she merely carried out my thought, which had not been formulated as a mental order, and this she did mechanically, as though not knowing what she did. But the somnambule, despite her apparent inability to see, might have noticed my not having on the cravat. I therefore decided to make the same experiment over again with another object, and for this purpose I chose a bit of black ribbon that no one had seen me wear: this, too, I passed to Mr. Janet by the hand of a third person, not a word being spoken. Mr. Janet held the ribbon in his closed hand. Suddenly the somnambule opened his hand, took the ribbon, and as soon as she had touched it danced with joy like a child, saying: "He is there! He is there! He is not gone!" Then she asked for a piece of paper, and it was given to her. She wrapped the ribbon in this and held it out in the direction of me, to give it to me. I did not stir, and she grew impatient. Mr. Janet tried to take the little parcel from her, and her irritation increased. Then I took up a broad-brimmed hat, and with that concealed my hand and Mr. Janet's. The instant the parcel touched my hand, Mrs. B. smiled and tried to give it back to me; but when she found Mr. Janet's hand she withdrew the parcel, and showed signs of displeasure. After many experiments of this kind her agitation increased, and she had a real paroxysm of

hysteria, which Mr. Janet tried to quiet by applying his forehead to hers. (It seems that ovarian pressure has not this effect upon Mrs. B., who, I repeat, presents no symptom of hysteria in her normal state.)

To elucidate the question of her discernment of objects, I proposed to Mr. Janet to take three similar leaves of paper, touched by three different persons and marked by them. It was done, and an effort made to pass the papers to Mrs. B. But she objected strenuously, struggled, and would not touch them. She brushed them aside with her handkerchief, and was not quieted till she saw them on the floor. Then she threw the handkerchief on the sofa, and started when she chanced to touch it. When the three sheets of paper were by force laid in her lap, she struggled, threw herself back, and fell into lethargy. The experiment had therefore to be given up.

I was obliged to return to Paris, but one more experiment in endorming from a distance took place, under the direction of Mr. F. Myers. The details were communicated to me by Mr. Janet, as follows:

"On Saturday, after you left, nothing of real interest occurred, save an experiment in somnambulism produced from a distance, under precisely the same conditions as on the day before. The Messrs. Myers had me to lunch with them, and suddenly requested me to endorm Léonie at an hour they had agreed upon—a little before 3 o'clock. I thought upon it for a little less time than the previous day—about ten minutes—and we went forthwith to the pavilion, without waiting. Léonie was asleep over her work, as on the preceding day; she had been endormed just about 3:15. All that is known with precision is that she had gone upstairs to her work hardly a quarter of an hour before (at 2:45). It is further to be noted that no one had endormed her since the preceding day, and that I had not seen her that morning.

"Léonie said it was I that had endormed her. It seems that at that moment she had an hallucination—such, at least, is Mr. Myers's opinion. She kept saying that *she saw me endorm her*.

"During the sleep we did little more than repeat what you have seen already. . . . The sleep was disturbed by a storm which caused very violent paroxysms (*crises*) such as I had not seen before.

"The Messrs. Myers left Saturday evening. I endormed the subject once more Sunday morning, but I did it all alone in continuation of my researches.

"As soon as I shall see Léonie in her second state, which is for us the true one, I will convey to her your compliments.

"I am, etc.,

"P. JANET.

"Havre, May 4, 1886."

I left Havre with a profound emotion. I had at last witnessed the extraordinary phenomenon of action from a distance, which upsets all the opinions currently received. I summoned up my recollections, I questioned my notes a hundred times, to make sure of the reality of

MENTAL SUGGESTION

PART II.

what I had just witnessed. I examined the facts from the skeptic's point of view, if perchance they might be pure accidence and coincidence, then from the point of view of the magnetizer ; finally, I looked at them in the light of the suggestional theory and of other intermediate theories, possible or fanciful ; and I came to the conclusion that leaving out the first three experiments, which were inconclusive, the fourth stands and cannot be explained save by *a causal connection between an act of will and an effect produced at a distance.* But as I have already said, in questions of this kind one must himself make the experiments ; one must himself have brought out—and that again and again—the phenomenon, with a subject and amid surroundings that he knows thoroughly, if he is to give a definitive judgment. Now, with regard to the action from a distance in this case, I was but a passive observer, and therefore I must have my reserves upon the matter. I have, however, verified mental suggestion from anear, but *I saw only one* experiment from a distance that to me seemed to meet all the requirements.

CHAPTER V.

NEW EXPERIMENTS.

A FEW days after my return to Paris I had occasion to make some further experiments upon two hysteric patients whom it was my duty to treat under like conditions.

Miss Z. was magnetized by me for hysteric paroxysms, complicated by physical exhaustion and marked anæmia. (Hypnoscopic exp. : sensation of cold and slight analgesia.) The first seance gave no positive result, except that my hands were chilled in quite an extraordinary degree. The patient, having passed through a torpor hardly perceptible to her, felt a little better, but did not admit that the magnetism had had any effect. The second seance produced magnetic sleep, and then a rather protracted paroxysm, but the transition from waking to sleep and from sleep to the normal state took place so imperceptibly, that she would not believe in the sleep, and was almost quite unconscious of having had the paroxysm.

At the third seance, she told me that she did not at all believe in the sleep produced, and said that I should never succeed in endorming her ; that if she remained for a time motionless that was because such was her good pleasure, but that should she only try to make a little resistance, I should have no influence. I advised her not to open a discussion that led to nothing, and said that if she persisted in her resistance I should prefer doing nothing, lest I should produce

useless excitation. But my efforts to persuade were in vain; on the contrary, Miss Z. was set in her purpose to convince me, and positively asked me to endorm her against her will. As that experiment could not, in the present case, cause serious mischief, I at last consented.

After a few minutes she was endormed by fixing the gaze, but straightway passed into somnambulic delirium, constantly repeating: "No! I won't! You shall do nothing with me!" Little by little the delirium became a spoken dream lasting more than an hour. The patient remained seated and quiet, heard only me, but was not quite obedient. I told her to go to bed, the hour being late. She refused, saying she was very well as it was, and that she wanted to be left undisturbed.

I might have awakened her, but from what I had seen I was almost sure that the awaking would bring about an hysterepileptic paroxysm in the normal state, contrarily to the therapeutic principle of magnetism. (My treatment of hysterepilepsy by magnetism consists in this: I transfer, so to speak, the paroxysms to the magnetic sleep, and thus suppress them by degrees in the normal state. The cure is complete when a paroxysm can no longer be produced even in the somnambulic state.)

At this moment a young lady companion entered the parlor quite noiselessly and looked with astonishment at Miss Z. "Do not look at me," said the latter. "You make me ill." (The patient's eyes were shut, and she was some twenty-five feet distant from the visitor.) Miss Marie, the caller, withdrew frightened. But the patient still kept crying out to her: "*Do not think on me!* You make me ill."

These words, which might have been dictated by a presumption and not by a real psychic action, recalled to my mind Mr. Gibert's experiment. Wishing by hook or by crook to get the patient to bed so that I might leave, I tried unconscious psychic inoculation. I applied my forehead to hers, saying mentally: "In five minutes you will want to go to bed." The patient continued to rave, and seemed in no wise influenced by my action. Five minutes passed and she said nothing to me. Then I advised her, for the tenth time at least, to go to bed. "*As you wish*," she answered. She went to bed and perforce believed in magnetism now, for the next day she was unable to account for her being there.

Mr. Gibert believed strongly in the efficacy of mental action by contact of foreheads. He has told me that often he has in this way arrested violent hysteric paroxysms. I wished to test the matter, and an opportunity soon presented itself.

Miss S., to all appearance, sound, strong, not at all anæmic, was subject to attacks of the major hysteria of great violence, but very infrequent. One might even say that hers was *latent hysteria*, for it

manifested itself only under the influence of moral causes at intervals of several months, or even of several years. Still, it was the greater hysteria, a very serious case, presenting all the chief phases so well analyzed by Mr. Charcot, including the period of delirium at the end of the attack. This always lasted several hours, nay, a whole night. Miss S. was very sensitive to hypnotism, and that explains the intensity of the attacks. (Hypnoscopic exp. : insensibility and torpor soon extending to the whole nervous system, producing an hypotaxic state very much like sleep.)

Once I made with her some experiments in mental suggestion with playing-cards. The result was rather remarkable. She never divined quite aright, but she *always* had a perception correct in part, and always in accord with the visual, but not the auditive characters. For example : I thought of the deuce of spades, she divined tray of spades ; I thought of the queen of hearts, she divined jack of hearts ; ten of clubs, she said nine of spades ; and so on. In divining, she shut her eyes, bowed her head, and remained absorbed in a visibly monoideic state that struggled with the ordinary impressions. After a quarter of an hour of this exercise her countenance was changed, and gave tokens of great fatigue. I interrupted the experiments, and to bring her back to herself made a few awakening passes. I was wrong ; I ought rather to have endormed her completely, and allowed her to take repose in that state. For a moment she was freed from her enervation, and seemed entirely well. But the shock had been produced, and the partial disturbance of the normal equilibrium brought about an attack.

We were at table when I was notified that Miss S., who had gone to her chamber, was writhing in convulsions. I hastened thither and found her on the floor in a fearful paroxysm. She was rolling on the floor so violently that I had all that I could do to hold her by the arms ; but restrain her I must, for she was dead set upon dashing her head against any hard object whatever, or throwing herself out of the window. Then I tried Mr. Gibert's plan ; but it was without result, whereas ovarian pressure stilled the paroxysm a little, at least for a few moments. In such cases it is difficult to endorm the subject. The struggle lasted three hours. After the first hour she was already a little influenced, and about every ten minutes she fell into a somnambulic dream, with rapport ; but by reason of the quite surprising force of her convulsed muscles, and of the necessity of keeping her in restraint unaided (she could not brook the touch of another person), I found myself exhausted, and every time I brought about a beginning of sleep, it was broken by frightful convulsions. At last, after a dozen attempts at suicide, a quiet delirium appeared ; she became voluble in speech, passed again in imagination through divers episodes of her life, but remained calm by my side, answered my questions, and

was beginning to obey me. I induced her to rest on a bed, and there little by little lucid somnambulism got the better of the attack. The rapport was well defined ; she heard only me, and that only *when I wished her to hear*, so that we talked about her all the time, aloud, without her knowing it. The slighest touch by a stranger, even through the bed clothes, even when the sense of touch could give her no information, produced irritation and threatened her with a new attack. While speaking in somnambulism she always addressed me in the familiar form of speech—*thee*, *thou ;*[1] consequently I did the same. "Go and rest now," she said : "I shall sleep quietly till 10 o'clock tomorrow morning. At that hour you will come and awaken me." I went home and slept like a marmot. On the morrow at 9:30 I entered her chamber.

"I heard you coming along the street," she said, "but do not awaken me yet. It is not yet 10 o'clock."

"Did you sleep well?"

"Yes ; *because you did.*"

I found that the head was still a little hot, and offered to endorm her a little more deeply, to calm her. She assented. I made several passes without contact, and then went to the parlor and waited, reading a newspaper at a window. Suddenly I heard a noise like that of a falling body. The noise came from the street, but I fancied it came from her chamber, and for a moment I feared she had been seized by a new paroxysm. But that alarm shot through my mind like a flash, and lasted hardly one second ; immediately the reflection came to me that there was, at that moment, nothing to fear, and I did not even stir from my place nor change my position, but kept on reading.

After a quarter of an hour I went to the patient's room, between which and the parlor was another large room looking into the courtyard, not upon the street.

I touched the patient's head and found it hotter than before. "Why?" "Because you are alarmed about something," was her answer. "Not at all," I replied, forgetting at first the trifling occurrence in the parlor ; "why should I be alarmed?" "I don't know, but you are alarmed, and that has given me a congestion."

At this moment she was in *an inert polyideic* state (she exercised thought, but made no spontaneous movement).

I calmed her head by laying my hand upon it, and then tried mentally to suggest to her some movements, but without success. A little after I spoke quite near to her, addressing her, but intending not to be heard. She answered, nevertheless. I now formulated the order that I was not to be heard, and then recommenced the same

[1] The English language has lost the faculty of exhibiting this distinction.—*Translator*.

experiment in other words, and without any possible verbal suggestion. *She did not hear.*

"You will awaken me soon and I shall not have any more paroxysms."

"No more?"

"No more. I shall recollect nothing, and you must not tell me what passed during the night. Furthermore, you will give me your word that you will never try to act upon me from a distance."

"And do you think that would be possible for me—to act from a distance?"

"Yes; but you must not do it, for that would make me ill; I should be worried all the time."

"And if I promise you that, you will be no more made nervous by my presence?"

"No!"

"How do you recognize the touch of a third person?"

"Because it is disagreeable—strange—different—unbearable."

Miss S. was serious-minded in the sleep. She was always grave and laconic in somnambulism, and never laughed, a fact which gave a peculiar air to that state. She said that it would be preferable to endorm her entirely, instead of wanting to awaken her quickly. "But that makes no difference," she added; "I shall not have a further attack, *because you have let me have a long sleep.*" In reality she slept fourteen hours consecutively.

"Awaken me now, *but quite gently.*" (A request often made to me by somnambules in like cases.) So I awakened her very slowly, taking some twelve minutes to do it, by means of transverse passes without contact. At length she smiled, opened her eyes, and looked around surprised. She asked what meant my presence at her bedside, and recollected nothing.

During the following days there was only general fatigue and a little pain in the spleen, and that disappeared by degrees. In the evening she had headache. I removed this pain by imposition of hands, but on leaving I had a slight headache myself. I went to see another patient, *who never had had headache*—at least so she assured me many times. This patient I put to sleep (it was very difficult to endorm her, but the sleep was very deep). My headache disappeared. I awoke the patient after half an hour.

"I am doing very well, don't you think so?" she said (she is ataxic). "But this is odd, my head pains me a little; something that has never occurred before to me." I removed her headache, which disappeared for good.

I smile as I write this narrative, so strange and incredible does it seem to me. But to proceed; I have not yet exhausted my casket of surprises:

I saw Miss S. again that evening. She has headache again, and my hands are exhausted, my skin burning. I feel a disagreeable moisture (*moiteur*). I dip my hands in cold water, but all I can do is to allay her headache for a few moments. So with regard to the pain in the spleen. A cold compress cools her head, but does not banish the pain.

The following day I felt refreshed, and easily banished, in the case of another patient, a very intense headache attending an attack of fever and lasting three days. After this I found a fourth patient suffering from a slight headache. I may remark that I am unable to fix the precise moment at which my hands regained their force. I was reading *a book that pleased me much*, and suddenly I felt the disagreeable dryness (*sécheresse*) of my hands disappear, and regained my wonted feeling of a certain agreeable freshness.

I will cite one more complementary observation, since all this helps to throw light upon our problem.

When I find my eyes fatigued from reading I go to the theatre, and there, looking at things from a distance serves to give them rest. But sometimes, in order to refresh the eyes, I press the palms of my hands upon the lids.

Now, when the hands are exhausted I experience no relief, but if only some scene in the play, or a well-spoken phrase produces in me an agreeable emotion, my hands at once regain their therapeutic quality, and then if I apply them to the eyelids, the fatigue of the eyes disappears.

I reached the house of Miss S. "What were you doing last night at 11 o'clock?" she asked, abruptly. Inferring some somnambulic eccentricity, I said to her: "Ah, no! You shall first tell me what you know, and I will tell you whether it is correct."

"So be it. You were writing the whole evening, and it was not letters, for I saw big sheets of paper. You did not read a book, but you wrote all the time, and then at 11 o'clock went to bed, but were unable to sleep, and so got up again and walked up and down your room, smoking a cigarette."

Here a person who was with Miss S. the preceding night informed me that after going to bed she did nothing but repeat continually: "Oh, my God! When will he go to sleep? He prevents me from sleeping." I said nothing, and Miss S. continued her story:

"Then, at last, toward 1 o'clock, you fell asleep, and woke just at 7 in the morning. Is that so?"

It was all precisely so, barring a constant slowing of the time. That is to say, she "saw" me still writing at 11 o'clock, whereas I quit writing about 10.45. But it is precisely so that I did not read any book, that the whole evening I wrote on large sheets of paper, that, unable to sleep (my mind being preoccupied), I got up again

(quite exceptional this, for I never have had that habit), and so forth. The hour of rising was also stated correctly, within a few minutes, though about that time I was accustomed not to get up till 8 o'clock.

I add that Miss S. had no knowledge either of my domicile or of my habits, and that I lived about half a mile away.

It was difficult to accept mere chance as an explanation, but then what did this mean? Here is all that I can say:

Until that evening I had not had time to take notes upon Miss S.'s case. Without any thought of acting upon her, having indeed promised that I would not, I began to recall to mind exactly all that had occurred the other day, and it is my custom to make my notes very circumstantial. Consequently *I thought of Miss S. the whole evening.* As the matter involved certain rather interesting details from the theoretic standpoint, this mental occupation kept me from sleeping and all the time my thoughts dwelt upon questions in which she played the chief part.

As for Miss S., she retired to bed early and in a half-sleep believed she saw all that took place with me, but she declared that my mental occupation prevented her from sleeping and that she was angry at me, feeling a sense of strange dependence which she could not rid herself of. At last on awaking at 7 o'clock she felt as though I also had awaked.

The day following, also, she had a similar sensation, less clear, however, and then this rapport disappeared.

The case then probably was one of "veridical hallucination."

I know other facts of this kind, but I do not wish to raise this question here. It seems to me as yet too difficult and premature. I give this narrative only as a simple piece of evidence, and I shall be content in the sequel with analyzing the direct experiments, which seem to me more palpable.

The reader will find in the work compiled by Messrs. E. Gurney, Frederic Myers and F. Podmore, under the auspices of the London Society for Psychical Research, several hundred similar cases, well attested and collected for many years. Its title is "Phantasms of the Living" (2 vols. London, 1886).

I will add only that Mrs. M., too, believed she saw me on the occasion of my address to the Society of Physiological Psychology, January 25, 1886, in which I spoke of *experiments made upon her;* but she was informed of it beforehand. Still there were some details of which she was ignorant but which she saw in her dream, to wit, that while I spoke "I was concealed as high as the chest by a green table."

Was that thought-transference? Perhaps it was.

PART II.

FACTS OBSERVED BY OTHERS. EVOLUTION OF MENTAL SUGGESTION. PHYSICAL ANALOGIES.

CHAPTER I.

ORGANIC SYMPATHISM.

IS the surface of one body capable of transmitting, whether with or without contact, certain of its organic states to another body? Such is the question. We will begin with an examination of the physical states, passing thence to isolated sensations, and finally to thoughts. We shall therefore have to study :

A. Physical nervous transmission of diseases.
B. Transmission of emotive states.
C. Transmission of sensations.
D. Transmission of ideas.
E. Transmission of will.

Then we will study separately.

A. Suspended mental suggestion.[1]
B. Mental suggestion from a distance.

The history of magnetism contains many facts, more or less ill-observed, more or less ill-attested, appertaining to the foregoing categories, but they contain also a certain number of positive observations that ought to count.

Hitherto I have restricted myself to telling of what I have myself seen, judging that in this sort of phenomena one must himself be observer, actor and critic, in order to accept others' testimony. Otherwise one would have simply to accept *all* the alleged facts of magnetism, for all, or nearly all of them, are vouched for by respectable witnesses. Besides, no man can boast of such authority in science,

[1] That is, suggestion to be executed at a future time. I know not how to translate otherwise the convenient French phrase *suggestion mentale à échéance.— Translator.*

that he can introduce into the scientific domain an entirely new fact, theoretically isolated from all other facts, in short, unexplainable. Hence the precaution I imposed upon myself and on the reader had no aim, no significance, other than to make the latter a witness of the course of my studies, of the progressive development of my convictions, and hence of my methods. Plainly I do not hold that my testimony is worth more than that of other physiologists. I only say—excuse my egoism, if egoism it be—that it was worth more for me. And since one must be answerable for a book as for an act that endures, I do wish to have a clear conscience. That will, perhaps, not prevent the skeptics of scientific officialdom from taxing me with credulousness, and I shall be the first to understand and to make allowance for their skepticism ; but it certainly will save me from self-reproach in the future. That, I take it, is all that a writer can do. Unfortunately, authors have not always taken this precaution.

You wish to study in the history of magnetism the phenomenon of mental suggestion and you are looking for testimony of real weight. You open a book on hypnotism and in it find banter about mental suggestion ; those worthies never have studied it, but they assure you of the exactness of their negative judgments, based on the witness of other men of science, who in turn have not studied it either. At last you find a grave author who believes in mental suggestion.

Take Dr. P. Despine the younger, author of a big treatise in three volumes on "Natural Psychology"—a work very little known in France, but abroad justly prized. Mr. Despine has also published during the last few years a book on somnambulism. He believes in mental suggestion, even proposes a theory of it ; but as for facts, he has himself seen none. He refers to other respectable authors and especially to Dr. A. Bertrand, an excellent observer who published (1823 and 1826) two volumes on somnambulism and magnetism, wherein he treats at considerable length the phenomenon in question, but declares that he has no positive evidence drawn from his personal experience. He merely says that the number of testimonies that presented themselves in favor of the existence of this phenomenon in the different works wherein he sought information about ecstasy, compelled him to believe in spite of himself and obliged him to give more attention to the testimonies of the believers in animal magnetism. And he refers chiefly to authors of past times, to Father Surin, "a man of genuine piety, to whom the majority of his enemies did not refuse to do justice, but credulous *beyond all possible imagination.*" He refers to Poncet, author of religious books, an equally estimable personage, and to Madame Guyon, the best possible witness, for she "read the thoughts of Father Lacombe, her confessor, as he read hers."

I am only half in play. Bertrand, too, was but half serious when he said that he had not met with facts of mental suggestion in his

practice. He met with a few, and I will quote them in due time and place, as I shall also cite the facts observed by Father Surin and by Mr. Poncet, for they possess a certain value because of special circumstances.

But had I no other evidence than the testimony of Father Surin, Mr. Poncet, and Mme. Guyon, think you I would have published a book on mental suggestion, or so much as mentioned the existence of that phenomenon? Not I! Neither assuredly would I have denied it, for I never deny what I am ignorant about; but from that to a scientific affirmation of so strange a fact is a long way.

That is why I took care not to begin, as is the wont, with the history of the subject, and therefore with ancient testimonies; but now things are different. I have seen, myself clearly seen, and therefore I can have faith in the testimony of those who have seen the same thing, and it would not be fair for me to hide from the reader observations not my own. On the contrary, I wish to quote them all; that is to say, all that have the appearance of truthfulness, that have been well proved, and that are clearly analogous to those observed by myself. This latter proviso will be pardoned me, for without it I should be obliged to quote also things incredible, at least just now, and it is always prudent to advance slowly over unfamiliar ground in the dark.

I will array the subjects according to the classification given above, adding my comments, so as to present a full inventory of the known facts of mental suggestion, upon which will be based the theory, or rather the beginnings of the theory of the future. We will begin with a phenomenon seemingly foreign to our inquiry often found in the writings of magnetizers, to wit: the *appreciation of diseases by somnambules*, and the alleged power of *seeing the diseased organs*. Let not the reader be surprised at finding the matter considered here. It is essential, as will presently appear.

1. "I observed (writes Dr. Bertrand) a somnambule who, I was told, possessed the faculty of discerning diseases. . . . But not content with what they told me about her, I wished to test her with regard to a patient whose state I knew beforehand. So I brought her into rapport with a young lady whose chief malady was an attack of asthma, which afflicted her very often. When the patient came, the somnambule was already endormed, and I was sure that she could not know the person I brought to her. Nevertheless, after contact for a few minutes, she seemed to respire with difficulty, and soon *she experienced* all the symptoms that attend a violent fit of asthma; her voice was suppressed, and with much effort she told us that the patient was subject to *the kind* of oppression that her coming had imparted to herself. Nor did she limit herself to that, but added to what she had just said details of several local complaints and pains to which the patient was subject, and which she recognized with the greatest precision *by means of the sufferings she herself experienced in*

the corresponding parts of her body; but what in the most unmistakable way showed the somnambule's faculty was the discovery she made of an herpetic affection with which the patient was troubled in the genital parts. None of us had knowledge of this, and the patient alone could tell us how correctly the somnambule had hit it off in this respect."[1]

Bertrand adds to this observation the following remarks:

"In general we must, in consultations with somnambules, distinguish what they say they *experience through contact* with the patients from what they *fancy they see* within their bodies. What they say they feel is worthy of credit, while what they infer from what they believe they see never presents aught but baseless conjectures, often quite absurd."

2. "I showed," says the same author, "to another somnambule a female child of 4 years, one of whose arms was crippled in consequence of a fall which had produced a deposit in the shoulder-joint; further, a vice of constitution made her gait awkward, and she swayed from one leg to the other. The child was brought to the somnambule, and, during the whole time of the consultation, was held in the lap of the person who carried her. Thus, nothing could have taught the somnambule in advance what she should say. Yet, this is what happened. When the child was presented to her, the somnambule raised, with difficulty, her own flexed arm, seemed to make vain efforts to raise it to her head, and exclaimed: 'Oh, the poor child, she is crippled!' On being asked what had caused the trouble she had just found out, she answered, 'A fall' (and that was the fact). After this first remark she said nothing for a little while, and then continued: 'Oh, my God! how weak she is in the loins! She must have much trouble in walking.'"[2]

3. "I was with the somnambule, whom I was magnetizing as she lay on her bed asleep, when I saw coming in a friend of mine accompanied by a poor fellow wounded a little before in a duel, a ball having entered the skull. I put the somnambule in rapport with the wounded man, and limited myself to asking her to say what ailed him. She seemed for a moment to be trying to find out, and then, addressing herself, said: 'No, no! It is impossible. If a man had a ball in his head he would be dead.' 'Well,' said I, 'what then do you see?' Said she: '*He* tells me that the gentleman has a ball in his head.'" (*He* was, according to the somnambule, a distinct being, separate from herself, and whose voice came from the pit of the stomach; a sort of guardian angel, *scilicet*, the Unconscious. It is probable that this notion of a revealer was suggested to her by some spiritist magnetizer.) "I assured her (continues Bertrand) that what she had said was true, and asked her if she could see where the ball had entered and what direction it had taken. The somnambule reflected a moment, then opened her mouth, and with her finger indicated that the ball had entered through the mouth and penetrated to the posterior part of the neck. This, too, was correct. Finally, she carried exactitude so far as to point out some of the teeth that were lacking in the mouth, and which the bullet had broken. The somnambule had not opened her eyes since the moment when the wounded man entered the

[1] Bertrand, "Traité du Somnambulisme," etc., p. 229. Paris, 1823.

[2] *Id.*, p. 232.

chamber. There was no lesion of the external integuments of the mouth."[1]

In his second work[2] Dr. Bertrand expresses himself in these terms:

"We find in the works of magnetizers very many instances of this phenomenon, and I myself have had occasion to verify it several times in such a way as to leave no doubt. There is no one, I believe, who has made any little observation of a few somnambules, but that has often seen them by simple contact feel the *pains* of the patients with whom they have been put in rapport." (Bertrand employs this term, consecrated by its use among magnetizers, but he attaches to it no other meaning but that of contact; he does not accept the "magnetic fluid" hypothesis.) "The impression thus received is commonly but momentary, and very rarely do they on awaking retain the symptoms communicated to them during the sleep. A few exceptions to the rule may be met, however, and in order that the somnambule retain the disease for a considerable time, he needs but to be convinced, from what he experiences, that he has really caught it from the patient. . . . That, apparently, is what happened to some of the 'Convulsionaries' of Saint-Médard, who thought that God accepted them as victims and permitted them to take the diseases of those who came to consult them. 'It often happened to the Convulsionaries,' says Carré de Montgéron, '*to take diseases without knowing whether the persons were ill* and in ignorance of the nature of their ailments. They were informed of these things by *the sense of pain they felt in the same parts.* It appears also that then the sick, witnesses of the singular phenomenon before their eyes, *believed themselves to be freed from their ailments* as soon as those ailments had passed into the bodies of the Convulsionaries. Thus we see one Chevalier Deydé relieved of his fits of dizziness after Sister Jane had taken them.' Among the *possessed*, when the exorcization was protracted for a sufficient time to accustom them to the terrible situation in which they were, many likewise believed themselves supernaturally informed as to the diseases of the persons present, and thus they presented the strongest resemblance to the Saint-Médard Convulsionaries and to somnambules. . . . .

4. "The documents concerning the trial of a (hysterepileptic) 'possessed' person named Mary Bucaille, in 1699, contain, with other matter, proofs of the phenomenon of the transmission of diseases. These proofs are the more worthy of attention because the prosecution confirms them as well as the defense, with the difference that according to the latter the phenomenon proceeds from a gift of miracle-working accorded by God himself, while according to the former it is of the devil's doing. Now, this Mary Bucaille had suffered in her person the ailment of Ann Séville, and evidently she must be a witch and a sorceress, 'it being the way of sorcerers to cure people by taking upon themselves their diseases.' The counsel for defense regards this assertion as proof of great ignorance on the judge's part, for 'he has always heard it said that a sorcerer, in curing a sick person, oftentimes casts the *maleficium* upon another person; but no one ever has heard it said that the sorcerer *takes the ailment upon himself;* and thus, in the cures that God has wrought by

[1] Bertrand, *ib.*

[2] "Du Magnétisme Animal en France," etc., pp. 428–430. Paris, 1826.

the said Bucaille, if she has in truth taken upon herself the ailments of the sick, as is proved as well with regard to the present case as with regard to the aged parish priest of Golleville and other persons that have been mentioned, then this way of curing others is something greater and nobler than other miraculous cures, which are performed by a single word,' " *et cetera.*[1]

What the possessed and the Convulsionaries did of themselves, under the influence of disease, somnambules did under the influence of magnetizers. The first fact of this kind known, being one of the experiments of the Marquis de Puységur, is given by Clocquet, in a letter dated Soissons, July 13, 1784, hence prior to the publication of Puységur's own narrative, which did not take place till toward the close of the same year.[2] Clocquet went as an impartial curiosity-seeker to witness the Busancy miracles.

"Attracted like others to this spectacle [he says], I took thither merely the dispositions of a quiet and impartial observer; fully resolved to be on my guard against the illusions of novelty; fully resolved to make good use of eyes and ears."

But here is what he tells:

5. "Mr. de Puységur chose from among his patients several subjects whom, by touching them with his hands and holding toward them his wand (an iron rod about fifteen inches in length), he caused to fall into a regular crisis. The complement of this state is *an apparent sleep*, during which the physical faculties seem suspended, but to the profit of the intellectual faculties. The eyes are shut, the sense of hearing is null, and awakes only at the master's call." (This is the phenomenon of isolation peculiar to the *magnetic sleep*, as distinguished from the *hypnotic state*, produced by an inanimate object.) "One must be careful not to touch the patient in the crises, *nor even the chair he sits in.*" (I have often, since 1867, observed and verified that fact.) "Were one to do so it would cause great suffering; convulsions that only the master can allay. These patients in the crisis,[3] who are called *médecins* (doctors), have a supernatural power whereby, on touching a sick person presented to them, or on *laying the hand upon him, even outside the clothes*, they know what internal organ is affected, the part of the body that is ailing. They name it and give pretty correct advice as to the proper remedies. I had myself touched by one of the *médecins*—a woman of about fifty years. I certainly had not told anybody the nature of my complaint. After giving some time to my head in particular, she said that I often had pain therein, and that I habitually had a loud buzzing in the ears, which

[1] "Du Magnétisme Animal en France," etc., p. 430.

[2] To the Marquis de Puységur is usually attributed the discovery of artificial (*provoqué*) somnambulism and of the faculty of which we are speaking; but one has but to read Mesmer's second "Mémoire" to be convinced that the founder of mesmerism knew of both phenomena. It is certain that he kept secret a portion of his experience.

[3] The word *crisis* has here the same meaning that Mesmer gave it. In general it signifies *any nervous state different from the normal* brought about by the processes of magnetization or by the patient's imagination.

is quite true. A young man who witnessed this experiment with incredulity, submitted to it himself afterward, and was told that he had trouble with his stomach, that he had engorgements in the lower abdomen—this since the occurrence of a fit of sickness a few years before. This, he confessed, was in accordance with the facts. Not contented with this divination, he forthwith went and had himself touched by another 'doctor,' twenty paces away from the first, and got the same answer. I never saw a man so dumbfounded as this one, who surely had come to contradict, to jeer, and not to be convinced."[1]

In a book published the same year (1784) under the title "Réflexions Impartiales sur le Magnétisme Animal,"[2] we find the following remarks upon the report of the royal commission :

6. "While the commission were making so many experiments, I wish they had extended their observations to one of those *somnambules*, made such by magnetic action, and subjected him to the following tests. After blindfolding him with the bandage employed in the other experiments, I should have liked to see them bring before him different persons whose ailments they knew, and ask him to tell what the ailments were. If this new style of doctor should discover the seat of diseases merely by contact, I rather think it would not be possible for the members of the commission to say that touching the patients produced the ailment, and that imagination or touch had anything to do with it. This experiment is decisive. *It has been made before my own eyes in Mr. Mesmer's practice ; and since then I have seen it repeated at Lyons many times with success*, every precaution being taken to prevent trickery. The different somnambules that served in the experiments were young women of the people. To them were brought sick persons unknown to them : they pointed out with the greatest exactitude the ailments with which these were affected. I have seen them *feel sharply the ailments* of those whom they magnetized, and make those ailments known by pointing toward the region of the disease in their own body."

In August, 1825, Dr. Foissac addressed to the Paris Academy of Medicine a letter in which he announced in the following words the phenomenon of the transmission of aches :

"By placing the hand successively on the head, the chest, and the abdomen of an unknown patient, the somnambules discover instantly his *complaints* and *aches*, and the various *symptoms* these occasion."

Here follows an account of the *instinct for remedies*, which does not concern us. Foissac exaggerates this, as he exaggerates also the diagnostic instinct, presenting as a general rule what is only a phenomenon more or less rare. The few somnambules he chanced to meet inspired him with unlimited confidence, which soon disappeared as his experience grew a little larger. He continues :

"There is no disease, acute or chronic, simple or complicated—and I except none of those which have their seat in either of the three

[1] Quoted by Bertrand, *id.*, p. 222. [2] Page 228.

splanchnic cavities—that the somnambules cannot discover and treat suitably; *for the case is not the same with those which are seated in the members and at the surface of the body, if they produce no general reaction, or do not disturb any essential function.*"

This restriction is important, especially when made by a competent enthusiast. Foissac, then, sees that if communication of symptoms is to take place they must proceed from a rather pronounced and rather profound disturbance of the vital equilibrium. And if somnambules do not judge equally well of local disorders "in the members and on the surface of the body," the reason is that the faculty here in question does not consist in *seeing*, or as Foissac himself puts it, in "*reading the inmost structure of the most hidden organs*," but that it is rather the faculty of *feeling* the disordered state of a disequilibrated nervous system. This disorder must be pretty considerable in order to react upon the somnambule as an electric charge in a conductor body acts on a distant galvanometer.

Full of confidence, Foissac proposed to the Academy a scientific investigation:

"Take (said he) in this city—at the Central Bureau or in one of the hospitals—three or five of the most pronounced or most characteristic cases of disease, and let these form the subject of the first test; for the second test you shall select the most obscure or the most complicated cases. The somnambules, I pledge my word for it, will give all the more convincing proof of their sagacity as the difficulties shall be greater. These experiments shall be repeated as often as may be agreed upon in order to convince you fully. A commission named by you shall observe all the details, and will render to you their report thereupon, and to that I will add my report. If you are not satisfied with their operations, you shall select others. Should I have any complaint to make against any of them, I, too, should have the right to name others. The truth could not fail to be arrived at by so rigorous an investigation."

True, but it is a rare occurrence for an academy to take an interest in a new truth. On the contrary, it is matter of frequent observation that academies care more for professional dignity than for the advance of science. This is a psychological phenomenon no less interesting than several others, but we mention it only in passing. The fact is that Dr. Foissac's letter was not even read to the academy, and that Mr. Adelon, the Secretary, judged it sufficient to acquaint the academicians with its purport. After a long and noisy discussion, the academy named a commission whose duty was to report "whether *it is fitting*, yea or nay, that the academy take up the question of animal magnetism."

Adelon, Pariset, Marc, Husson, and Burdin were on the commission. Husson was named Secretary.

After four months, December 13, 1825, the report was read to the

academy. It was a thunderbolt. Taking the works of Bertrand, Deleuze, and Georget for a basis, the commission decided in favor of the examination. Still, not till after several indecisive sessions was a commission of eleven members, nearly all unbelievers, authorized to begin the investigation. That was on February 14, 1826. The question of *fittingness* was decided by a vote of 35 yeas against 25 nays.

The commission experimented for five years, and its report was presented to the academy by the same Dr. Husson, June 28, 1831. It was entirely in favor of magnetism, and even confirmed the idea of action from a distance. As for the question which specially interests us, here is what the report says :

"There is not one of you, gentlemen, who in all that has been said to him about magnetism has not heard tell of the faculty possessed by certain somnambules, not only of defining the kind of diseases with which they are affected, the duration and the issue of those diseases, but also the kind, duration and issue of the ailments of persons with whom they are brought into rapport. The following three observations have seemed to us so important that we have believed it our duty to make them known to you in their entirety, as presenting very remarkable examples of this intuition and this foresight : . . .

7. "The commission found (says the report) among its members one who agreed to offer himself for the purpose of having his ailment pointed out by the somnambule (Miss Céline Sauvage). This was Mr. Marc. Miss Céline was asked to examine attentively the state of health of our colleague. She *applied her hands to the forehead and the region of the heart*, and in three minutes said that the blood was tending to the head ; that at that moment Mr. Marc had trouble with the left side of that cavity; that he often had a feeling of oppression, particularly after eating; that he must often have a light cough ; that the interior part of the chest must be gorged with blood ; that something interfered with the passage of the food ; that this part—designating the region of the xiphoid appendage—was contracted. . . . . We were longing to learn from Mr. Marc whether he felt all that the somnambule had declared. He told us that in fact he had a sense of oppression when he walked after meals ; that often, as she said, he had a cough ; and that before the experiment he had an ache in the left side of the head, but that he was unconscious of any interference with the passage of his food. . . . .

8. "There was another woman, 23 to 25 years of age, suffering for the last two years with ascitic dropsy accompanied by numerous obstructions, some the size of a hen's egg, others the size of the fist, some as big as a babe's head, the large ones having their seat in the left side of the abdomen. The exterior of the abdomen was uneven and lumpy, and these inequalities corresponded to the obstructions, the seat of which was in the abdominal cavity. Mr. Dupuytren had already ten or twelve times performed puncture on the patient, and had always drawn off a large quantity of albumen, clear, limpid, odorless, and without any admixture. Relief followed. The writer was present thrice at this operation, and it was easy for Mr. Dupuytren

and him to ascertain the volume and hardness of these tumors and consequently to see their own powerlessness to cure the patient. They prescribed, nevertheless, different remedies, and they attached some importance to this, that Miss . . . (the patient) should use the milk of a goat rubbed with mercury. February 21, 1827, the writer went in search of Mr. Foissac and Miss Céline, and took them to a house in the Faubourg du Roule, without telling them the name, the dwelling place, or the nature of the malady of the person whom he wished to submit to the somnambule for examination. The patient did not make her appearance in the chamber where the experiment took place, until Mr. Foissac had endormed Miss Céline, and then, after *taking one of the patient's hands* in her own, Miss Céline examined her for ten minutes, not as a physician would, by pressing on the abdomen, percussing it, scrutinizing it in every way, but *merely applying the hand again and again to the belly, chest, back, and head.* Asked what she had observed in Miss . . . , she replied that the whole abdomen was diseased, that there was a schirrus and a great quantity of water in the region of the spleen, that the intestines were much distended, that there were pouches containing worms; that there were tumors as big as an egg in which was contained pus-like matter, and that these tumors must be painful; that at the bottom of the stomach was an engorged gland the bigness of her three fingers, that this gland was in the interior of the stomach and must needs impair the digestion; that the disease was of long standing; and finally that Miss . . . must have headaches. She advised the use of an infusion of borage and of nitrated triticum caninum, 5 ounces of the juice of pellitory, taken every morning, and a very little mercury taken in milk. She added that *the milk of a goat* that had been rubbed with mercurial ointment half an hour before milking would be better.[1] The nourishment should consist of white meats, gruel with milk, but no lemons. She allowed very little wine, a little rum, *à la fleur d'oranger*, or peppermint *liqueur*. This treatment was not observed, and had it been it would not have saved the patient. She died a year afterward. As the body was not opened it was not possible to verify what the somnambule said. . . . . .

9. "In a case of some delicacy wherein very skillful physicians had prescribed mercurial treatment for an engorgement of the cervical glands, which they attributed to venereal disease, the family of the patient that was so treated, seeing grave symptoms supervening, wished to have the advice of a somnambule. The writer was called to attend this consultation, and did not fail to profit by this new opportunity to add to what the Commission had seen. He found a young woman, Mrs. La C., with the whole right side of her neck profoundly engorged by a great mass of glands lying close together. One was open, and from it issued a yellowish purulent matter.

"Miss Céline, whom Mr. Foissac magnetized in the presence of the writer, put herself in rapport with the patient, and declared that *the stomach had been attacked by a substance like a poison;* that there was

[1] "Without attaching great importance to this singular coincidence of the somnambule's prescribing the use of the milk of a goat rubbed with mercurial ointment, and the prescribing of the same by Mr. Dupuytren and the writer, the Commission must in its Report note it; it is presented as a fact the authenticity of which the writer guarantees, but of which neither he nor the Commission can give any explanation." [Note by the Secretary of the Commission.]

slight inflammation of the bowels ; that there was *in the right upper part of the neck* a scrofulous malady, which must have been more extensive than it was then ; that by the adoption of a soothing treatment, which she prescribed, there would be betterment in two or three weeks. She followed this treatment for a little while, *and there was a notable improvement.* But the impatience of the sick woman, who found the return to health not speedy enough, determined the family to call another council of doctors. There it was decided that the patient should again be subjected to mercurial treatment. The writer thereafter saw the patient no more, but learned that in consequence of the administration of mercury *she had had very serious stomach troubles*, which carried her to the grave after two months of great suffering. A minute of the autopsy, signed by Messrs. Fouquier, Marjolin, Cruveillier and Foissac, showed that there was *a scrofulous or tubercular engorgement* of the glands of the neck, two small cavities filled with pus, resulting from the discharges of the tubercles at the top of each lung, and that the mucous membrane of the great cul-de-sac of the stomach was almost entirely destroyed. These gentlemen ascertained, further, that there was *nothing indicative of venereal disease, whether recent or of long standing.*"

The report ends with these conclusions :

"1. That, in the state of somnambulism, Miss Céline indicated the diseases of three persons with whom she had been put in rapport.

"2. That the declaration of one of these, the examination made of another, after three punctures, and the autopsy held on the third, were found to agree with what the somnambule had declared.

"3. That the several treatments prescribed by her are not of the class of remedies that she might have known, and not such as she might reasonably be expected to recommend.

"4. That she applied them with some discernment."

Mr. Foissac had the luck to be able to keep his word.

We may imagine the emotion produced in the Academy by the reading of the report, only a few pages of which we have quoted. Seldom has so impartial, so clear, or so discreet an account been given of so great a number of observations.

Applause was frequent, but when the question arose about printing the report, members began to have fears for the prestige of the Academy.

"Were most of the things recounted in this report real facts," said Mr. Castel, "they would upset one-half of our physiological knowledge, and it would be dangerous to propagate these facts by means of the press." The Academy had almost decided to follow this advice when Mr. Roux had the happy thought to propose a *via media ;* hence the report was not printed, but it was autographed.

It will be readily seen that despite a seeming exactitude "confirmed by the autopsy" in determining the lesions, this exactitude has regard only to the general functions, and that the remarks we have already made, as well as those of Dr. Bertrand, lose none of

their value. It is not *vision of the organs* that the commission found, but a sympathic perception, more or less precise, of the ailments of the patients. I remark further that these consultations of Miss Céline are slightly different from those of other somnambules already mentioned. *She does not suffer the pains and aches she is examining;* she simply perceives them as though they were something palpable; she *feels of them* (*tâte*), so to speak, but does not "catch" them. We shall see further on that this difference springs from the existence of two slightly different types of somnambulic perception. But the basis is the same, and it is always constituted by a possibility of nervic transmission; only we must distinguish between imitative or imaginative transmission, which has no relation to mental suggestion, and *physical transmission*, which serves as the basis of mental suggestion, and which may be more or less pronounced.

"Most somnambules," says Dr. Charpignon,[1] "feel the pains of the persons with whom they are put in rapport. This sensation is transitory, and leaves no trace on awaking if we take care duly to break the rapport. *If it is the magnetizer that suffers, the sensation is most vivid*, and often persists after awaking. If one in a state of ill health goes on magnetizing for several days, these impressionable somnambules become affected with the same complaint. Hence we must be very careful with regard to this point, and must exercise this prudence even with respect to psychic affections, for one can hardly conceive how serious is the influence of an agitated mind upon some somnambules. This identification [he adds] of the two nervous systems produces sometimes the phenomenon of imitation, so that if the magnetizer uses his handkerchief, or coughs, the somnambule repeats the acts; if he takes snuff, the somnambule sneezes; prick the magnetizer or give him a burn, and the somnambule feels the same pains in the same parts of the body."

In this passage three different phenomena are confounded:

1. Imitation of movements—a subject studied of late by Heidenhain.

2. Hyperæsthesia of the sense of smell (the magnetizer takes snuff, the somnambule sneezes).

3. Transmission of sensations.

But evidently in practice these phenomena are usually associated, and that constitutes one of the difficulties of experimentation, and is at the same time a pretty strong argument for the theory of "sympathism," as we shall see.

This word *sympathism*, employed sometimes by Charpignon, seems to me well chosen, and I shall accept it, giving to it, however, a more precise meaning. I will use it to signify the phenomenon of direct and instantaneous communication of the sense of pain and of other subjective sensations, of feelings, and of emotive states; but not

[1] "Physiologie, Médecine, Métaphysique du Magnétisme," p. 72.

facts of observation through eye and ear; these might be comprised under the term "mimism."[1] Mimism, as related to diseases and to acts, will take the name of *psychic contagion*, while facts of disease-transmission (which is nearly always mediate and retarded) by touch alone, unbeknown to the one who undergoes the action, may be considered as coming under the head of *nervic contagion*, properly so-called, or *physical* nervic contagion.

Physical sympathism may be subjective or objective. It is subjective in somnambules who themselves feel the symptoms they discover. In Miss Céline and in the two following cases observed by Dr. Pigeaire, it was objective only.

10. "The lady put her hand in that of the somnambule, who forthwith said: 'Madame, you have a headache?' 'That is true,' the lady answered; 'since this morning I have had a pain in the head.'"[2]

11. "Some time after, Prof. Lallemand told me that a patient wanted to consult a somnambule. Wishing to be assured of the existence of this magnetic faculty, which, so to speak, senses ailments, we know not how, I once more tried my somnambule. [Pigeaire's own young daughter.] Hardly had she touched the sick man's hand, when she said: 'Your legs, sir, are dead-like.' 'Tell me,' said I, 'are you a paralytic; can you not move your legs?' 'No, sir.' 'You were ill after your coming to France,' added the somnambule, 'but now you are much better.' The old man made a sign of affirmation" (p. 61).

12. "Mrs. Ch. had for some time been suffering in her left jaw . . . The lancinating pains were concentrated in the temple and in the branch of the lower jawbone. The patient indicated the track of the pain, and the track was along the dental canal. The somnambule taking Mrs. Ch.'s hand, brought her own hand to her own face, touched with a finger the dental nerve, then the temple and the jaw. At last she said: 'This nerve (the dental) is attached to a blood vessel (the dental artery); it is the same here (at the temple). Well, the vessels are so distended with blood, and their tissue so inflamed, that they compress the nerves and irritate them.'"[3]

This last observation presents an intermediate type. The somnambule does not suffer, but yet she seems to feel the effect of the consultation, since it is *upon herself* that she shows the track of the pain.

Two observations with which we are already familiar, that of Mrs. R., who clearly defined the ailments of one of my patients, selected purposely for this test [p. 32, *supra*], and that of Mrs. B., who divined Mr. Marillier's complaint [p. 95, *supra*], belong to the first category. These two somnambules felt distinctly in themselves the ailments diagnosed by them, and I remember another consultation of Mrs. R.'s, after which she took a full quarter of an hour to recover from an illness communicated to her by a patient. In the course of a few

[1] The author uses here the hybrid and bastard word "imitatisme."—*Translator.*

[2] J. Pigeaire, "Puissance de l'Électricité Animale," p. 61. Paris, 1839.

[3] Charpignon, *op. cit.*, pp. 251, 252.

minutes her abdomen became hard and swollen, as happens in cases of hysteria. Almost of a certainty, had she been awakened at that moment, the ailment would have persisted many hours.

I add that then for the first time did Mrs. R., magnetized by me, make a diagnosis in the somnambulic state. She was in the habit of doing so in the waking state. One might say that in somnambulism she is *too sensitive*.

But as there are somnambules that recognize the ailments of patients without appearing to be affected by them, it is well to examine what the process is that guides them, and to this end I must touch on a phenomenon not less extraordinary, which, for a long time, I durst not publish.

CHAPTER II.

SYMPATHISM AND CONTAGION.

SOMNAMBULES of the second category are not satisfied with "entering into rapport" with the patient by touching his hand, or simply by remaining a few moments in his presence, as is often the case with Mrs. R.: they touch the patient at sundry points, and pass their hands over his body, intent upon what they are doing. Can it be that this performance gives them any indications as to his pathological state?

That is the question. Its importance is seen; for could it be proved that on the surface of the body, and even at a certain distance, ailments more or less deep-seated manifest themselves in a way as yet unknown, science must seize upon so valuable a discovery, and seek to profit by it.

Now, for the first time, do I venture to speak of this phenomenon, though I have known it five or six years. And here is the history of my opinions:

Some seven years ago an old magnetizer, who was no longer in practice, for he was himself a sufferer, said one day to me: "Are you not afraid of doing yourself hurt by magnetizing so many people?"

"Why should I? I am always in good health and can stand a good deal of fatigue."

"I was not thinking of fatigue," said he. "But you take to yourself all the emanations of the patients, all the *morbific fluids*" (*fluides malsains*).

I laughed in his face. I did not believe in his "fluid," nor do I yet. But now I do believe in a certain physical action, whereas then I confounded magnetism with hypnotism, as people do to this day.

It is true that at that time I magnetized very few sick persons, hardly any at all; I made my experiments on healthy persons, and not till a few months afterward did I come to recognize the therapeutic value of magnetism, and undertook to make research in that direction.

But during the whole of the following year, though I magnetized many a patient, I observed nothing of the kind the magnetizer had spoken of, nothing such as I remembered to have read of in certain books, giving no credence at all to the stories.

In fact, it was not upon a sick person that I made my first observation of this kind. We were in the country. The Count de P., who had witnessed my experiments with peasants, asked me to make trial upon him.

I was unable to endorm him, but he believed he felt several very definite sensations. I did not speak a word to him, so as not to influence his imagination, but I, too, while magnetizing him, had a very peculiar sensation in my hands, never observed by me before—*a breath of cool air*, very distinctly felt when I held my hand above his at the distance of a few centimeters, or when I passed my hand about over his body. This sensation was not always of the same intensity, but sometimes, now and then, it was so distinct that it was like a person's breath blown between my fingers. Once the count exclaimed, "Oh, what a funny current!"

Only on finding that my sensations coincided with his, did I acquaint him with mine, and we spent many hours in studying them.

I must mention that the count, though in good health, had just passed many sleepless nights with his cousin, who was seriously ill, and that he was very much exhausted. It was in order to recuperate from this fatigue that he had come into the country.

The sensation I felt much resembled another one that was familiar to me. Any one may experience it by bringing the hand near to an electrostatic machine in action, but not so near as to receive a spark. But in spite of this analogy, I was inclined to think that it was nothing but a rapid absorption of heat, though I was aware that the phenomenon was not always in proportion to the temperature of our hands. At the same time I thought it might be all a subjective illusion, and now I regret my skepticism of that time, for because of it I neglected, in that case, as in a few others, to take detailed notes.

But my attention was won, and I began, little by little, to see in this phenomenon a real cause. First I was forced to recognize that it is *more or less independent of heat.*

I had a patient, anæmic in the highest degree, who always found my hand hot, even when it was numb with cold (it was winter), while she gave me a sensation of cold, despite the heat of her skin upon direct contact.

Another patient, a man, who was also highly anæmic, gave me the same sensation, and in this case there was actual loss of heat, for my hands became very cool in a few minutes.

Usually the contrary is the fact : my hands grow warmer during magnetization and I have a distinct feeling of *dryness*, not always in direct proportion to the actual dryness of the skin.

Still another patient, a man suffering from phthisis, caused me the sensation of a cool draught, but only from the level of the lungs; and an ataxic patient had a cold sensation in the left side, a hot in the right. The magnet produced exactly the same effect (without any distinction of poles), whereas I felt nothing. Finally, in other ataxic patients the case was reversed : they felt nothing, while I had a very clear sensation on one side, for one leg of the patient *drew*, as it were, a current of air from my hands (either hand), while the other leg did not draw at all, or did so less sensibly.

By degrees I found that this phenomenon occurs in many other persons, sick or exhausted, and thus I am sometimes able to determine the degree of exhaustion of a single organ even. I must add that when there is complete paralysis of long standing, I feel nothing—at least so it has been hitherto—and that sometimes the sensation is lacking despite exhaustion.

I have made some very curious observations on the feeling of a breath or faint current of air restricted to the track of *a single affected nerve*, but I have not yet arranged the facts in logical order.

But then, to make amends, I have found another kind of sensation that has given me more positive results. I have relieved hundreds of persons of headache by simple imposition of hands. Simple though the process is, the phenomenon is complex, and I have no intention just at present to theorize upon it. Still, two things are certain: 1, that by this method (which is as old as the world) I remove the headache in 60 cases out of 100 within a few minutes; and 2, that very often I can tell the precise instant at which the pain grows less and disappears under my hand.

And this is how I notice the change : The aching head may be hot or cool, and everybody knows that headache may be produced by several different causes. But independently of these differences, one character, perceptible only to him who holds his hand upon the head, and who is in the habit of observing, is almost constant, to wit, *a sensation of increased warmth under the hands* if the pain is disappearing, but *a lack of this sensation if the ache continues.*

This phenomenon may be observed not only in the head but over the whole surface of the body, and particularly at the epigastrium. If a given surface of the skin overlies a sound organ, the subjective sense of increasing warmth should begin immediately after the imposition of the hands, and should attain maximum after a few minutes.

Some persons to whom I communicated this observation have more or less easily confirmed it; but I cannot guarantee that the phenomenon will, with everybody, present the same character or the same definiteness. I would add that, acting without contact, at the distance of a few centimeters, I sometimes obtain the same results and the same sensations.

As I am not writing a medical treatise, I pass over details and exceptions, and merely remark that henceforth it becomes theoretically possible to diagnose an invisible malady by the touch of the hand. This power may depend simply on a *heat reaction* hitherto overlooked in medical thermometry. The details I have given will, perhaps, have some interest for Professor Grasset, who has just published an essay on the *rapidity* of the action of animal heat upon a thermometer as a diagnostic character,[1] and who holds that "the emissive power, often in contradiction to the patient's temperature, is, on the other hand, proportioned to the sensation had on touching the body."

We know what close relations subsist between certain diseases and the peripheric temperature; Mantegazza's studies show that, as a rule, pain reduces the body's temperature; Mr. Charcot's researches have taught us to distinguish cerebral hæmorrhage from softening of the brain, simply with the aid of thermometric readings; and Mr. Williams asserts that he can tell from the degree of temperature observed to what category of patients an idiot belongs. Even Hippocrates declared that "the expired air that issues cold from the mouth and the nostrils is a death sign," etc.[2]

If it is so as regards rough general indications, it becomes probable that more detailed, more specific *indicia* might give a more or less exact idea of the pathological state of the organism—the more because the thermometric signs do not stand alone. Electric reactions come of necessity into play, and the already old observations of Frank, Nieszkowski and Sniadecki prove that some hysteric subjects are conscious of them. I have, myself, made some researches on this point, but cannot yet state the results with precision. These questions are too obscure, though some physicians think they find in electric reactions the principal causes of diseases.[3]

A subject a little better known, and one closely connected with the diagnostic of diseases by somnambules, is that of *odoriferous material exhalations.*

We must not be led astray by appearances. Somnambules seemingly employ only the touch or tactile transmission from a distance,

[1] "Un Nouvel Élément de Thermométrie Clinique." Pub. in *La Semaine Médicale*, August, 1885.

[2] A detailed analysis of these questions will be found in Redard's "Etudes de Thermométrie Clinique." Paris, 1874.

[3] *See* Scoutetten, "Évolution Médicale, ou de l'Électricité du Sang," etc. Metz, 1870.

but I have repeatedly found that they are also guided unconsciously by olfactive sensations. Cut them off from these, and you will in many cases see the appreciation and communication of symptoms sensibly lessened. Smell is the unconscious's own sense, just as sight is the sense of the consciousness, and touch their common master.

Civilization has suppressed in us the science at once deep and wide which animals possess, and for which they are indebted to the sense of smell; but somnambulism and certain morbid states give it back its true value. We must not forget that if the hypnotized subject can remain insensible while inhaling ammonia, he may also, a moment later, distinctly sense the odor of apples by sniffing at several yards' distance the paper in which apples were wrapped some days previously. Now, it is certain that our individualities, our pathological states, our feelings even, betray themselves by a specific odor which we do not knowingly perceive, but which none the less acts upon smell, leaving on the brain unconscious traces *that in turn associate themselves with the state that produced them.* And by virtue of the law of psychic reversibility, the sensation *a*, belonging to the state A, may reproduce the latter, just as the state may reproduce the sensation. (*See* Part III., Chapter viii.)

That which is quite easy in a state of exceptional exaltation of smell and *exclusive concentration of the attention* upon one object ("rapport"), of course, is hardly possible in the normal state, and sometimes incomprehensible. But it is not to be forgotten that, as Dr. Monin says in his remarkable semeiological monograph,[1] "Odorant waves always reveal important chemic changes . . . and *in all biological phenomena* play a leading part."

Most diseases have their specific smells, and these, by marking the stage of the pathologic evolution, may even guide us often to a sure prognosis. "In the chamber of a lying-in woman, the sour smell betokens to the practiced nose that all is going on well, that the work of milk secretion is beginning. On the contrary, an ammoniacal smell will make the physician fear the imminence of the morbid syndromus known as puerperal fever." Dr. Vidal, of Cassis, records in his "Treatise on Surgery," that J. H. Petit, while traveling in Germany, distinguished *the smell of gangrene* among other smells not less disagreeable, and so was able to cure a man dying of strangulated hernia (p. 6). The cutaneous perspiration and the various secretions of the skin diffuse round about each individual a special odor. This odor, commonly but little sensible, is very distinctly sensed by certain persons of highly developed sense of smell. Cadet de Gassicourt ("Dict. des Sciences Méd.," vol. iv., p. 196) tells of a young matron who by the smell alone distinguished men and women. She could not endure the smell of her bed clothes when touched by any one but herself.

[1] "Les Odeurs du Corps Humain," p. 4. Paris, 2d ed., 1886.

The *Journal des Savants*, 1864, relates that a monk in Hungary could by olfaction tell a chaste woman from one not chaste. Perty cites many cases of this kind. It appears that the Cardinal Alexander Albani, after losing his sight, distinguished by olfaction young women from old.[1] Debay reports an observation of a somnambule who, after examining by smell a score of different objects, apparently inodorous, as rings, pins, brooches, etc., belonging to ten different persons, sorted them and distributed them to their owners without making a mistake.[2]

It is even not impossible that certain psychic states may reveal themselves in the same manner, for certainly the odor of the cutaneous exudations undergoes marked changes under the influence of sundry emotions. Says Dr. Monin :

"The action of the nervous system on the odor of the cutaneous exudations is highly important; not infrequently it is heightened or modified by moral excitement, depressing passions, and neuroses. Gamberini (*Annali Universali*, 1854) cites the case of a young man, who, in consequence of being crossed in love and of a violent fit of jealousy, gave out from his whole body a fetid smell, nauseating and very lasting. Dr. Hammond, of New York, lately reported (*Med. Rec.*, June 21, 1887) the case of a young hypochondriac whose skin gave out the odor of violets; of a victim of chorea who exhaled the odor of pines; of an hysteric woman, who, in her crises, emitted the smell of bananas; he tells of another hysterical woman whose transpiration was restricted to the left anterior half of the chest, exhaling the odor of iris. In the latter case a chemical examination of the sweat was made and showed the presence of butyric ether."

I have myself observed an hysterical woman in whom the approach of a paroxysm was announced by an odor of Gruyère cheese, or rather by an odor that recalled the taste of Gruyère. In another case a metalloscopic plate of tin applied to the patient for a few days acquired a very strong smell resembling that of petroleum, despite the patient's scrupulous neatness.

"In *localized perspiration* (continues Dr. Monin) these odd osphresiologic anomalies are by no means rare. Schmidt knew a man subject to a hyperhydrosis limited to the hands, and who smelt of sulphur. Orteschi observed a young girl who without any trickery gave out a strong odor of vanilla from the commissures of the fingers. All these phenomena result from disorders of innervation. According to Hammond the *odor of sanctity* is not a mere rhetorical figure, it is the expression of a holy neurosis[3] perfuming the skin with effluvia, more or less agreeable, at the moment of the ecstatic religious paroxysm" (p. 17). "In lethargy (which hardly ever occurs in hysteric subjects[4])

[1] Perty, "Anthropologie," I., 187. Leipsic, 1874.

[2] A. Debay, "Hygiène des Douleurs," p. 32. Paris, 1877.

[3] *Sainte nevrose* is Dr. Monin's rendering of Hammond's phrase, whatever that may have been.—*Translator.*

[4] Or rather in *hypnotizable* subjects.

the cutaneous exudation emits a cadaveric smell, thus adding to the picture of death, already so realistic. This odor must doubtless have been the cause of frightful mistakes: such at least is the opinion of Bernütz."

According to the researches I have made in cholera times, hypnotizable persons constitute the greater part of the quickly fatal cases; but such persons are the ones liable to fall into *true lethargy* (profound paralytic aideia), presenting all the appearances of death. It would be well, therefore, in such cases to have recourse to magnetism, which might transform this state into somnambulism; or to call in a somnambule who presents the phenomenon of sympathism, and who doubtless will know better than we how to distinguish apparent death. At all events one must not laugh at this means before one has tried it.

As the different mental states find expression by means of a trophic action of the nervous system, they may produce a special cutaneous odor. The odor exhaled from the skin in mental diseases, an odor noted in 1862 by Dagonet, has been studied particularly by Fèvre of Toulouse in his work "Les Altérations du Système Cutané dans la Folie" (Paris, 1876). He there says (p. 19):

"The sweat of insane persons has special *sui generis* emanations, penetrant and infectant, like those of hands that are kept constantly shut, something like the smell of mice or of the fallow deer. This smell is found especially in general paralytics and confirmed dements.[1] It impregnates the clothing, bedding, furniture, as well as the rooms occupied by the insane; and it is very lasting, in spite of soap and water. This odor is so characteristic in simple insanity (*folie*) that Burrows declares that were he to find it given out by any one he 'would not hesitate to pronounce the person insane, even if there were no other evidence.' An English psychiater goes further: Knight declared that he could detect pretended insanity by the absence of this physiognomic odor."

This pathological exhalation may even be localized and may occupy a region of the skin corresponding to the inward disorders. S. Weir Mitchell has noticed that in nerve lesions the corresponding cutaneous region emits a smell resembling that of stagnant water. Mr. Monin is of the opinion that in such cases we have an epithelial dystrophy rather than actual changes in the physiological secretion—but that is no reason why an hyperæsthesic sense should not be able to detect by this means the state of the disease and its area.

That most *occupations* may have their specific odors we can understand. Mr. Monin sees nothing out of the way in the saying of the famous Vidocq: "Place me in a crowd and there I will pick out from among a thousand a *galley-bird* by the smell alone." Chomel

[1] French *dément*, Latin *demens*. The meaning is plain—a victim of *dementia*.—*Translator.*

observed for six weeks a groom suffering from pneumonia, whose sweat retained during all that lapse of time the smell of the stable.[1] Again, Monin writes :

"In enuresic patients, a urinous smell, or a mousy smell, penetrant and which nothing can suppress, has often been of use to military surgeons in detecting the simulation of incontinence of urine. So, too, in constipation there is an odor from the skin like that of fæces ; often we have found that this odor perceived by the patients, contributes to bring on hypochondria, which is ever lying in wait for sufferers from this complaint" (p. 25).

In gout the skin secretions take a special odor, which Sydenham compares to that of whey. In jaundice the odor is of musk ; in oppilation, of vinegar ; in syphilis, of honey ; urinous in urinary disorders (cystitis) ; of sour beer in scrofula (Stark *apud* Hebra) ; of warm bread in intermittent fever (Heim) ; in diabetes when there is perspiration the smell is of hay (Latham), or rather of acetone (Picot), but according to Bouchardat, midway between aldehyde and acetone, being due to mixture, in variable proportions, of these two bodies. In cholera the odor is ammoniacal (Drasch, Parker) ; it is acid in what is called milk fever ; sweet in the onset period of the plague (Diemerbroeck), or honey-like, according to Döppner, who observed the plague at Vetlanka (*Lancet*, February 1, 1879) ; aceto-formic in rheumatism, particularly in the region of the engorged articulations (Monin) ; of new-plucked feathers in measles (*rougeole*) ; of new-baked bread in scarlatina ; in small pox the odor is that of the fallow deer; in typhoid fever it is that of blood (Béhier). Frederic Bérard goes so far as to say that, apart from the secretions, the cutaneous odor *draws flies to a still living body*. However little noticeable it may be, it says plainly that death is near: a sweat having a cadaveric odor *precedes* death, says Bœrhaave (Aphorism 728 of the *editio princeps*). Dr. Althaus tells us that Skoda hardly ever was led into error by this indication, and Crompton, of Birmingham, also laid great stress upon this as an important clinical symptom. But the smell given out at the death agony is totally different from the death-odor : it is universally admitted to be specific, and it differs entirely from the odor of putridity.[2]

It would be difficult to insure the exactitude, or, at least, the practical value of all these assertions. But they suffice to show that there is ground in facts for the occult judgments of somnambules, not only from the diagnostic, but also from the prognostic, point of view. Clearly, disease is not bounded by the surface of the body; it goes beyond it.

The reader, doubtless, has heard tell of extraordinary diagnoses made by somnambules at a distance, by means of some object belonging to

[1] Monin, *op. cit.*, p. 25.

[2] Monin, *op. cit.*, p. 27.

the patients, especially by means of *a lock of hair*. Why by a lock of hair in particular? Perhaps because the hair, because of its odors, manifests better than any object the patient's pathological state.[1] Dr. Charpignon cites many facts of this sort, and, like all magnetizers, attributes this form of transmission to the *magnetic fluid*. These facts I do not bring forward here because I have never had cognizance of anything of the kind. Once only, some fifteen years ago, wishing to experiment upon this point, I took a lock of my grandmother's hair and handed it to a somnambule. She told me that it belonged to a beautiful lady with whom I was in love, and that my love for her had not cooled much of late. True, my grandmother's hair, despite her age, is still black. This somnambule, like all extra-lucid somnambules, had her "professor," who turned her doings to profit for himself. To make sure of her lucidity, usually he did not endorm his subject; he simply bandaged her eyes, which gave to the consultations an air of serenity. But the woman was sensitive and well endormed when I consulted her. Her state, however, was one in which sensibility offers nothing out of the common. She would doubtless have divined better in the waking state.

So I have not verified this phenomenon, but it appears to me to be not at all impossible. The hair itself possesses an odor peculiar to each individual, and which varies according to sex, race, age and pathological state. We are told that the hair of the Chinese retains its musky odor even after it has been washed with potash (Galippe, paper read at the Société de Biologie, January 25, 1879). "Hair-dressers [wig makers?] can tell easily," says Mr. Monin, "simply from the smell, whether a bunch of hair was cut from the head of a living person, or whether it is made up of hairs that have fallen out."

There are also wide differences with regard to the tactile sensations produced by a bunch of hairs. Their thickness, their elasticity, their smoothness, the rustle they make when rolled between the fingers, vary widely. And there is no doubt that there subsists a very close relation between the quality of the hair and the psychic states. Everybody knows the injurious effect of grief, which may be produced in a very short time. I have observed in myself that my hair becomes less supple under the influence of worry, softer under agreeable conditions. Gratiolet makes the observation that melancholy makes the skin dry and, consequently, the hair too.

At the same time the odor changes perceptibly with the dominant state of the nervous system. "In hysterepilepsy," says Monin, "the

[1] Dr. E. Louis de Séré prefers a shirt or a flannel vest that has been worn by the patient. In his book are found thirty-five more or less extraordinary observations of this kind. Its title is "Application du Somnambulisme Magnétique au Diagnostic et au Traitement des Maladies." Paris, 1855.

hair, at the moment of the paroxysms, has a special odor, always the same, resembling the smell of ozone, or of an electrical machine operated in dry weather" (p. 33).

Hence, it may be that a hyperæsthesic sensibility can detect in a lock of hair a certain number of true symptoms. "But," some one will, perhaps, say, "your whole explanation is rather obscure. A somnambule may have sensations that we never receive; nothing more likely than that. But to find the smell of ozone in a lock of hair and to divine hysterepilepsy, are two things. So with regard to all the other objective explanations. It remains yet to be proved that somnambules *know the meaning of these signs.* Granted that each disease, each emotion—why not each thought?—is manifested outwardly by a modification of our material emanations: that is quite possible; but the bond that connects these modifications to these states, the inmost relations between them—where may the somnambule learn these?"

I answer: First, we must not exaggerate the phenomenon we are trying to explain.

Sympathism exists, but it is a rare fact. In a hundred somnambulic diagnoses you will hardly find a dozen that are entirely exact. That suffices to exclude the hypothesis of bare chance, but it does not suffice for the formulation of a simple, precise theory, always applicable. It is not well to prove too much, and to make that appear simple which is not simple. We must allow a little for chance, for natural acuteness, for involuntary suggestions, for the vagueness of most sympathic communications. Then the difficulty of finding a causal bond between a sensation felt and its physiological meaning is not so enormous as it seems. That bond exists, and it is formed in this way:

Our experience is twofold: conscious and unconscious. The latter is the larger—by far the larger; it is the first, has a basis in heredity; it is ever growing richer at the expense of conscious experience; it is ever insensibly completing the latter by generalizations, impulsions, presentiments. We have much more in our brains than we suppose—much science we little think we have; and Socrates was right when he said that we give birth to ideas, but do not create them. Ask a man what was the color of the walls of a room he lived in last year—he will, perhaps, be stalled; but take him to that room and he will readily see whether any change has been made. You may fail to recognize an old friend, but his face will, perhaps, suggest to you a series of recollections. You have never thought of defining the "cutaneous odor" of a loved person, but a like odor will make you think of her, and you will not even know why. What one of us has not been for a longer or shorter time with a number of sick persons that exhaled an odor or exerted some other sort of action upon us,

that to us was entirely unconscious? But nevertheless there was then formed in our brains a close association between the presence of a sick person and that particular reaction. We do not feel our own cutaneous odor, but were it to be changed suddenly we should surely note the difference. And these associations are ever forming, and they persist. We are not aware, but our unconscious knows very well, that in a moment of fear, joy, pain, hope, anger, love, as well as in pathologic states that we ourselves have been in, our individual atmosphere changes, and, recognizing this change in another individual, it may infer these several states, and even may, under exceptionally favorable conditions, make them sensible to ourselves. Now the conditions can nowhere be more favorable than in the state wherein:

1. All extrane sensations are shut out;
2. The attention is wholly set in one direction;
3. All the senses may be in a state of exaltation.

And if sometimes sympathism attains a surprising degree of force, if the symptoms we discover appear in ourselves, or rather reveal themselves by this apparition, that, again, is an effect that is not of necessity physical; it, too, may be the product of a psycho-nervic reflex action. But to understand it we must know that the *association theory*, as set forth in psychology, is very incomplete, in essential particulars incomplete. Psychologists think they have said all when they admit associations between thoughts, feelings, sensations, volitions and movements.

Well, if that were all, our psycho-physical mechanism would be utterly incomprehensible. We could not even tell why these associations are not a dead letter, why they live and are operative. Bain long since felt the necessity of postulating an *involuntary energy* beyond the known associations. The theory of association is not false; it is only incomplete. Psychological association is but a special case of biological association in general, and physiology will not be a comprehensible science—one comprehensible in its details—until we apply to it the same association principle that has been of such service to modern psychology. We will here dwell upon only one point of this application: there are associations between ideas (emotions, sensations, etc.), but there are also associations between ideas and states that seemingly have nought to do with psychology—bodily, organic states: there are ideorganic associations.[1] An idea may be associated with an inflamed finger, a skin secretion, a paralysis of the right arm, a sore on the left jaw, the quantity of adipose in the tissues, a neuralgia, an attack of cholera, of rabies, and so on; and these associations may be so definite and real, that, as the thought of Peter produces the thought of Paul, the thought of an hæmorrhage shall produce hæmorrhage, the thought of a cicatrization produce cicatrization, of a disease that

[1] *See* Appendices II. and III.

identical disease. I have seen hæmorrhages stopped by the act of the imagination ; I have seen sores healed rapidly by suggestion ; I have seen a fat hysteric woman grow thin in the course of a few weeks by somnambulic order ; I have seen cases of cholera brought about simply by thought-influence, apart from any epidemic action.

Hence, it is nothing surprising if the recollection of some ailment should itself produce that ailment.

Finally—and here ends my answer to the objection stated above—I do not at all intend to explain everything by one theory. A theory that is simple is rarely a correct theory, particularly in biology, particularly in hypnotism ; and the tendency to refer unknown things to things known must not blind us to new and complex facts. Objective sensations, unconscious perception, ideorganic associations do not account for *all* the facts of sympathism and nervic contagion. We must have the courage to make that confession, and must look in other directions.

I have already mentioned the sensations the magnetizer sometimes feels on touching the patient. I was not the first to observe them. There is nothing new in " hypnotism " ! A hundred years before me, these sensations were discovered and studied with special care by a physiologist and physicist now quite forgotten. His name was De Bruno, and he was the introducer of ambassadors to the Count d'Artois, brother of the King of France. His first book was on mineral magnetism ; then, Mesmer's " animal magnetism " having attracted his attention, he devoted himself, 1785–1805, to a series of original researches, the results of which would have filled two volumes. He died in 1818, leaving them unpublished. At that period, animal magnetism having been discredited by the legitimists of science, the family of the deceased did not care to authorize the publication of the work ; it was handed over to the Société de Magnétisme and appeared only in extracts under the name of Mr. de Lausanne.[1] This book had but a feeble echo. It was the further extracts quoted by Mr. Aubin Gauthier[2] in his " Practical Treatise " that made it a little better known, though without rescuing the author from oblivion.

There are extraordinary things in Bruno's experiences that I cannot guarantee. He himself, it seems, had great sensibility, and perhaps " complementary imagination " was not altogether a stranger to him ; but as there is a certain analogy between his observations and mine, albeit I am not at all hypnotizable, I will give a few quotations:

" If Nature (says this author) has endowed the one who magnetizes with a nerve sensibility of some little delicacy, he *will feel externally* many of the irregular movements that take place in the

[1] Lausanne, " Des Principes et des Procédés du Magnétisme," etc. 2 vols. Paris, 1819. The first volume contains the extracts from Bruno.

[2] A. Gauthier, " Traité Pratique du Magnétisme," etc., pp. 233–289. Paris, 1845.

magnetized person ; *sensations* will be for him sure indications of the work that Nature, aided by his action, is doing in the patient. It is true that all persons are not gifted with this sensibility, and that *it is not always of the same degree of delicacy in the same person;* but some there are to whom this property becomes sometimes burdensome ; and there are others who, in a state of crisis, have such sensibility as renders incredible the degree to which the delicacy of their organs makes them capable of distinguishing. To my natural organization I must refer a sensibility *that has been perfected by the habitual use* that I make of this property of my senses. I owe much to this use and to the attention with which I note my sensations. Were everybody to do as much, this property would become very common, and there might be developed in some individuals a delicacy of sensations that would seem far more extraordinary still than anything I may report about my own in the sequel" (pp. 86, 94).

Let us observe, in the first place, that we find in Mesmer the following passage: "Touch *at a little distance* from the part is *more powerful*, because there exists a *current* between the hand, or the conductor, and the patient. . . . . We observe the *flow of a matter* (*écoulement d'une matière*) the subtility of which penetrates all bodies" (Prop. xxiii).

It is perhaps this subjective sensation that led him to adopt the theory of a *fluid.*

"There is no doubt," says Bruno, "that Mesmer formally designated the currents (he even gives them a special name—*tonic currents*), and that he recognized their existence ; but there is nothing to show that he explained the subject to his disciples."

Bruno distinguishes *sensations of currents* from *entrainments* (attractions) of currents. Apart from the sensation of a current, he further believed that he felt *attractions* toward certain parts of the patient's body. He communicated these experiences to Dr. Deslon, who noticed something similar on holding the hands an inch or two away from the stomach of a patient. He felt peculiar sensations "in the flesh around the root of the nails."

"The sensations (says De Bruno) vary according to the person you magnetize. You feel, for example, that the breath (*souffle*) that blows upon your hands is *warm.* This warmth has differences that habit will teach you to distinguish ; the warmth is greater or less, more or less *dry.* Sometimes it makes the hands *dry.* I am accustomed to wet my hands, and not to wipe them ; the current soon removes the excess of humidity. I wet the hands to retain the sensibility, which is reduced by dryness."

It is seen that these sensations are nearly the same as those I experienced before I knew of Bruno's works. As regards the influence of humidity, I made use of it in the Infant Jesus Hospital at Warsaw, in 1881, not to increase the sensibility of my hands, but to increase their curative action (gentle massage) in a very obstinate case of

hemianæsthesia. The thought to do so came to me instinctively, and the effect was very favorable, for the patient's sensibility came back under my hands, and I gained ground far more rapidly than if the hands had remained dry. Four seances sufficed (with the aid of somnambulism and hypnotic metalloscopy) to restore the patient's sensibility.

"In other circumstances (continues Bruno) you have sensations of *cold*, and this cold, too, shows differences. Sometimes there is a very faint tingling at the tips of the fingers; again there is a prickling and a numbness. One experiences also a nervous shudder. A feeling of cold nearly always betokens an obstruction, an engorgement, or some atony" (pp. 76–79). "A dry, burning heat betokens a tension of the fibers; a gentle, moist heat is a favorable symptom, which tells of a freer circulation, and sometimes an evacuation" (Deslon, Aph. 14).

Formication at the finger tips indicates the existence of bile and of acrid blood, especially if it is felt when the head or the arms are magnetized (Bruno, p. 79). The benumbing of the hand, the fingers and their extremities, shows a defect in circulation (p. 77). The magnetizer sometimes feels a *fluctuating* motion in the fingers, which tells him that a movement of the blood is going on (*un mouvement sanguin s'effectue*) in the patient (p. 78). When there is slime (*des glaires*) in the stomach or chest, the fingers seem to become clumsy and stiff; sometimes one feels in the fingers a *circular pressure* as though a silk thread were wound around them (Mainduc, Deleuze, "Instr. Prat.," 342). This pressure sometimes appears as high up as the wrist, which feels as though a bracelet were tightly clasped about it (Deslon, Aph. 10; Bruno, 77). When there is nervous relaxation, the hand is quickly wearied; there is a degree of weakness in the fingers and wrist (Bruno, 78; Deleuze, 343; Gauthier, 11, 12).

Besides these sensations in the hands, Bruno had also sympathic sensations all over the body. "When **I** am very near and face to face with a patient," he says, "*I feel the reaction of his work*[1] *in the part opposite*, so that an ache in the liver makes itself felt in the spleen, or parts adjacent; and one in the spleen, in the liver. But when I am at a distance from the patient, the pains are felt in the same viscera as are affected. These observations, repeated almost daily for three years, confirm me in the belief that like parts in each individual exert upon one another reciprocal action."

An English author, Dr. Mainduc, quoted by Deleuze ("Inst. Prat.," 342), gives some indications that do not agree always with those of Bruno. For the latter *cold* indicated obstruction; while, according to Mainduc, in obstructions one feels a sensation of acridity, dryness, contraction and formication, if there is no inflammation, and of *warmth* if there is inflammation. Contusions produce a sense of

[1] Physiological work; the work of his organs.—*Translator.*

heaviness and numbness in the hand. The presence of worms produces formication or a pinching sensation (*pincement*) in the fingers. In nervous relaxation there is a feeling of weakness in fingers and wrist.

"I know a man," says Deleuze,[1] "who was very closely associated with the one whose work I have quoted. *He feels the disease of those he magnetizes;* he experiences in advance, *and sometimes in a very painful way*, the crises they are soon to have." "I know (says Gauthier) a lady of about 50 years, a grandmother; she has been present at the several child-births of her daughter-in-law; and placing her hands on the seat of the pains, she felt and announced in advance the crises that were about to come" (p. 278).

I shall not go so far; but, as I have already said, by putting my hands on the suffering organ, I can, not always, but very often, tell the moment when the trouble is disappearing, for then it is that I have the inward impression of a gentle warmth, or a warm shiver.[2] According to Bruno, such a sensation announces that the circulation is in equilibrium. On the contrary, if the hands grow cold, instead of warm, I begin to have doubts of success. "I know a lady," says Deleuze again, "who when she begins to magnetize feels much heat in her hands. After a seance of three-quarters of an hour, her hands become quite cold; she then no longer acts" (p. 334). "I also know

[1] "Instruction Pratique," etc., p. 344.

[2] A lady of my acquaintance whom I taught to magnetize, though without communicating to her the phenomenon in question, being elated by the successful result of her first experiment, wrote to me as follows: "As I announced to you in my last letter, I have, by the aid of the hypnoscope, found three persons of sensibility. One of them is Mrs. A.'s daughter, a girl of 18 years. One day, seeing her suffering from a severe headache, which never lasts less than two or three days, I began by touching her forehead and head, as you taught me to do, and as I learned in the little book "Le Magnétisme Curatif." In ten minutes the ache was over; it came back the next day, weaker, at the same hour, and did not return on the following days. I cannot express to you my gladness and astonishment. But that is nothing compared with what remains to be told. The same young lady has for some years suffered fearfully on the first and the third day of her period. She was suffering in this way a few days since; she was bathed in perspiration and did nothing but cry for pain. The thought occurred to me to try the same means, for all the remedies ordered by the doctors had been without effect. Thinking that anyway this could not do her any harm, I laid my hands upon her stomach and then made passes. In 10 or 15 minutes my patient was sleeping quietly, and she slept for nearly two hours. Upon being awakened she was entirely well, and the third day of the period passed without any pain. Can it be that my action produced this result? I can hardly believe it, for she fairly writhed in agony. Tell me what you think about it. And, strange to say, *I felt the pain going away, as though something was becoming assuaged* [*quelque chose s'apaisait*] *under my hands.* (Is that an illusion of mine?) *I felt a strange pulsation in my hands, and particularly in the fingers.* After every treatment of this kind, I find myself *horribly* fatigued; it was as though I were losing part of my strength. (Is that, too, an effect of my imagination?) Please explain all this to me, and advise me what I am to do in other cases."

several magnetizers who, when they lay their hand upon the seat of an internal ailment, feel a pain extending to the elbow; the hand grows numb and even becomes swollen. This effect grows less with the disease; it ceases with the cure, and this cessation shows that the magnetism is no longer needed." "I have known a physician to experience this sensation the first time he tried to magnetize. In other persons it does not appear till after repeated trials. I have not experienced it myself. Yet some effects that I have experienced under sundry circumstances lead me to believe that I should have acquired it had I taken pains to study the cause that produced them" (pp. 330, 331).

As for me, I never have felt any direct and immediate painful sensations. As an immediate effect, I have often felt simply fatigue, an exhaustion of a peculiar kind not in proportion either to the movements performed or to the emotion or the psychic concentration.

We must distinguish between these phenomena.

The action of the magnetizer in making passes produces fatigue, like all monotonous movements, though they be slow. But this fatigue is something well known; it is muscular fatigue. We can fatigue in this way the arms, but not the legs, for we do not magnetize with the legs, and in most cases of magnetizing persons in good health one has no other sensation but that of fatigue of the muscles.

With novices in magnetism in certain important circumstances, and particularly in dealing with patients that are seriously ill, another sort of fatigue is added to the first—that of exhaustion by emotion.

The sufferings of others cause us suffering through sympathy. Now, every suffering, every painful emotion, causes exhaustion, especially when prolonged. This fatigue is not localized in the muscles. On the contrary, the muscles may be exceptionally excited under the influence of such an emotion. Persons who are feeble and ill regain their strength when called upon to care for a person dear to them, who is ailing worse than themselves. But at last an emotion may produce exhaustion in an instant and give a sense of prostration, of moral fatigue.

Finally, there is still another sort of fatigue, known only to those who have practiced magnetism for a long time. This, too, is an exhaustion, even an exhaustion more lasting than that caused by an emotion, but it is of a different character. This I will call *external exhaustion*, for it produces a feeling as though *the surface of the body* chiefly were fatigued. Especially in the hands, one has a very unpleasant feeling of dryness. The surface of the body seems to us void;[1] we are no more master of the ambient air; it presses upon us and weighs upon us. And this sense of exhaustion, if due to an

[1] In the original *vide*, empty, void, etc. The sense is by no means obvious.—*Translator.*

important cause, is not easily removed. Rest acts very slowly—far more slowly than in muscular or in psychic fatigue. There is only one way of working the miracle of reconstitution, and that is massage.[1]

The state of the hands is sensibly bettered by dipping them in cool water, and the state of the whole body by a vapor bath, but massage is needed for complete restoration. I recommend to all who magnetize many patients these three processes: First, immediately after a magnetization, dipping the hands in water, and in case of need, or from time to time, a vapor bath, then massage.

Once, when in this sort of state, I laid my hand upon the forehead of a patient in somnambulism suffering from headache. She allowed the hand to remain for a few minutes, then put it away without saying a word. "Why did you remove my hand?" I asked: "it always soothes you." "Yes; but it is spoilt."

When, after having dipped my hand in cool water, and taken some rest, I visited her again, she no longer put my hand away. "Why do you allow it to remain now?" I asked. "Because it is *better*," was the reply. She could not tell me what she meant by saying that a hand is "better," "good," or "spoilt," but subjectively I was forced to recognize these differences, for my "spoilt" hand was spoilt for me too, because of a sense of weakness and disagreeable dryness (a subjective impression this, for the hand was not dryer than usual) and of an enervating heat. But the conditions must be exceptional for this effect to be produced in me in such a degree.

The prediction of the old magnetizer was fulfilled for the first time under the following circumstances: I was attending a consumptive patient, whose fulgurant pains came on by paroxysms and lasted for hours. There was only one way of allaying them—imposition of hands. The reader will laugh at the remedy, yet the fact was so, nevertheless. Taking a seat by the bedside of the patient, I laid one hand on his thigh and waited for the thermic reaction. It did not come till after 10 or 15 minutes: the pains grew less by degrees, and at the end of a quarter of an hour, sometimes later, they would end. As for me, I would be quite fatigued.

And yet neither the physical fatigue nor the emotion—I had grown accustomed to these crises—could account for this general sense of

[1] The phenomenon of exhaustion seems to have been observed when the magnetic treatment was first used in France, for Jussieu mentions it in his report to the King: "The treatment, especially treatment by contact, may fatigue those who administer it. I have never experienced this myself, but I have seen many magnetizers, worn out after protracted seances, have recourse to the tub [in the original, *baquet*, a tub of water employed by Mesmer in his seances.—*Translator.*] and to *contact with another man*, and regain their power by the use of these two means." ("Report of one of the Commissioners appointed by the King to investigate Animal Magnetism." Paris, 1784.)

exhaustion. I had not, however, any painful sensation. But the following morning, and sometimes in the night, I used to feel in the back or in the arms pains of a peculiar kind. At first they did not last long, and though they were pretty sharp they impressed me as counterfeit pains, superficial, extraneous. They were but an *echo* of the fulgurant pain of the patient.

This phenomenon was repeated rather often without any injurious effect. I have since then observed other cases where transmission seemed unquestionable—in fact I have observed many cases of double transmission, that is, of transmission to a third person unbeknown to him.

I would catch a headache, say, or some rheumatic affection, from a patient, and involuntarily would transmit it to another, though with decreased violence and with some retardation. A pain thus doubly transmitted I have always been able to remove so that it would not return. Twice only have I observed in myself almost immediate transmission. In the first instance there was nervous aphonia that had to be cured as speedily as possible, for the patient was to deliver an address in public. The voice was restored for the whole time of the address, but I was hoarse for a full quarter of an hour. The second instance was one of cold in the head, which was communicated to me almost instantaneously by one of my patients. She experienced a little relief (though I had magnetized her for an entirely different ailment). As for me, the cold in the head lasted the whole evening, disappearing the next morning. In other cases the "communicated" cold in the head would appear only in the night. I would awake feeling really ill and hardly able to breathe; then I would sleep again, and it was all over.

So curious are these phenomena of *nervous contagion* that it needs a little courage to speak of them; but we must speak of them, for assuredly in this transmission we recognize the *first stage in mental transmission.* Organic states can be transmitted from one individual to another, and hence thought transmission is only a question of degrees, for a thought always answers to a special organic state.

Nervous contagion is a rather frequent phenomenon, provided one takes the trouble to notice it. For me it was an easy thing to find, for ever since my fourteenth or fifteenth year I have been in the habit of observing whatever goes on within myself and the effects produced by different influences. In the meantime I never have been seriously ill, but if I suffer from any indisposition I am able readily to say what is the cause. The transmitted ailments were the only ones that I was unable to refer to any common or ordinary cause, and little by little I was forced to succumb to the evidence and to admit the phenomenon in question.

Still—and this I never have thought of denying—the influence of the imagination may play a part in many of these phenomena.

When you take a headache without any suspicion that the person you are magnetizing has one, and it disappears in him the moment it appears in you, there is reason to infer physical nervous contagion. In most cases the magnetizer knows of the ailment, and if so, then quite likely psychic nervous contagion by ideoplasty is added to the direct action. Here are a few highly instructive facts upon this point, that have been confirmed by the experience of many persons. Several Brussels newspapers mentioned them at the time of their occurrence. The following narrative is written in the form of a *feuilleton* by A. Lebrun, a clerk in the (Belgian) Ministry of Justice, a neophyte in magnetism, and therefore an ardent apostle :

. . . "Another day I met two poets and a prose writer; and as one is required to give names when one speaks of magnetism, I may say that the poets were Messrs. Adolphe Mathieu and Van Hasselt, and the prose writer Mr. Deschamps. The first-named and the last were strong unbelievers ; Mr. Van Hasselt was already well along in the road of the faith ; he was a catechumen, asking only for full illumination. I noticed my three men right on Carmes Street. I had notified Mr. Montius, the magnetizer ; we found him at home, in company with a female somnambule, and he set to work at once. The oddness of the mimicry of magnetism caused the two unbelievers to chuckle. As for Mr. Van Hasselt, he was as solemn and thoughtful as one of Lamartine's "Meditations." Mr. Montius, noticing this, conceived forthwith a favorable opinion of the poet, and wanted to make an experiment upon him. But now the somnambule complained of a violent headache that had come upon her suddenly. Mr. Montius smiled with an air of satisfaction. We asked him why he smiled. 'Why,' he answered in a whisper, 'I gave her that headache on purpose It was now the turn of our unbelievers to smile. But the somnambule having heard what Mr. Montius had said, exclaimed : 'Since 'tis you that gave it me, you can take it away ! Take it away, then ; I pray you, take it away !' 'One moment,' said Mr. Montius ; and applying one hand to the somnambule's forehead and the other to Mr. Van Hasselt's, he made him a gift of the somnambule's headache, she exclaiming with glee : 'Thanks ! My headache is gone.' 'Yes, gone, but I have got it,' cried Mr. Van Hasselt, with a woful expression of countenance. The rest of us burst out laughing uproariously, with the exception of the patient, whose pain grew more and more intense. He begged Mr. Montius to make the headache pass to another head. 'Well, here is mine,' said Mr. Deschamps ; 'and if you succeed in introducing into it what is in Mr. Van Hasselt's, I pronounce you, not in verse, but in correct and polished prose, a being such as fancy paints, a very wizard !' 'I will try,' the magnetizer answered, 'but I do not guarantee success ; unbelief is a force that repels magnetism.' At the same time, raising his arms, he laid one hand on the head of Mr. Van Hasselt, and the other on that of Mr. Deschamps. I observed attentively the face of the latter ; the two corners of his mouth, at first kept wide apart by a sardonic smile, insensibly came together so that soon his mouth made a perfect letter O, proving that the serious mood of Mr. Van Hasselt was gaining on our friend. Suddenly he freed himself from Mr. Montius's

hands, saying: 'Enough; I surrender. The devil take me if I haven't an able-bodied headache!' 'Yes, but I am beginning to think that you have all conspired to act a comedy at my expense,' said Mr. Mathieu, who till now had looked on, seemingly meditating deeply. 'Pass my headache to him to convince him,' said Mr. Deschamps to the magnetizer. 'With pleasure,' Mr. Montius replied; so he operated on Mr. Mathieu as upon the two others. Again the experiment was entirely successful, so that the new patient shook his head repeatedly as though to make sure of the tenacity of the ache he felt. He wanted to keep his megrim for some time, for fear lest conviction should vanish suddenly with the ache.

"Such, reader, is the story I had to tell you for your convincement, for, I do confess to you, they that believe in these phenomena have a mania for sharing their conviction with everybody." [1]

It is probable that in these experiments the first transmission—from magnetizer to somnambule—was effected by a physical nervous contagion, but in the cases that follow ideoplasty plays the principal, if not the only, rôle; else the ailment would be considerably lessened at each transmission.

Du Potet, one of the most experienced practitioners, advised his pupils always to magnetize without contact, and the reason he gives is this:

"*Inoculation by Contact.*—Among the facts I have ascertained I may quote these: A woman suffering from a gouty arthritic affection, whose joints had become solidified, whose limbs had lost their flexibility, whose jaws, even, could not open fully, was put in rapport with one of my somnambules. This somnambule, after having seen the ailment perfectly and indicated the thermal waters that would cure it, complained of suffering in the same parts that were affected in the patient. I paid little attention, for it had been just so with respect to other ailments, and no ill results had followed. I awakened her,[2] but, much to my surprise, she was unable to stir; she could not open her mouth. In vain I tried to stay the trouble, which I supposed to be momentary. . . . She remained in this state three days. During that time we had to feed her like a baby, giving her broth in small spoonfuls, her mouth being three-quarters shut. Little by little the trouble left her.

"Another somnambule, after touching a patient whose blood was doubly corrupt—by syphilitic and by scrofulous virus—lost all her hair a few hours after the mere contact.

"A convulsive hiccough, a cough, a stitch in the side, were transmitted by contact to another sleeper.

"Another, from holding for some time the hand of an idiot, remained stupid for some days."

Here are facts it will be easy to make merry over. Idiocy, it will, perhaps, be said, *is* contagious—for magnetizers! Say what you will,

[1] F. Lebrun, "Transmission des Douleurs d'une Personne à une Autre (*L'Émancipation*, Aug. 4, 1838); Lafontaine, "Mémoires," vol. i., p. 87.

[2] The somnambule should never be awakened till all these symptoms have been done away.—*Du Potet's Note.*

the thing will remain true nevertheless. I have myself observed a like case with respect to another disease, though in a less degree. But I do not wonder at the incredulity these facts may meet with. With shame do I confess that after having read, hardly four years ago, the passage I have quoted from Du Potet, I made a big interrogation point and two big exclamation points on the margin of his book. These I now blot out and go on transcribing:

"Here is what Puységur says about this matter: 'The susceptibility of patients *in crises* for catching (*susceptibilité . . . . de gagner*) readily certain maladies, has many times been demonstrated for me. I have seen magnetic somnambules, in the midst of a swarm of many patients, ask [leave] to quit their place, saying that *their neighbors made them ill;* and others to withdraw precipitately. And often I have had to repair the mischief caused by the approach of certain individuals.'"

I observed lately a similar case. A young person, in good health at the time, produced, simply by her presence, an exceedingly violent paroxysm in an endormed lady. Some weeks later this young person fell gravely ill of typhoid fever, aggravated by an old heart complaint. Was it the influence of this on-coming pathological state that caused the mischief, or was it the girl's own individuality? Anyway, there was no suggestion: the girl had no thought of the disease, and she loved the lady well.

"One day (continues Du Potet) I consulted my somnambule, Vielet, upon the kinds of diseases most readily communicable to somnambules; he had himself twice or thrice had a sad experience in that way. His answer, which he gave in writing, and which I still have, was, that the most dangerous are epilepsy, scurvy, diarrhœa, cold paralysis, sciatic gout, catalepsy, itch, cold humors, and all venereal diseases.

"As for myself, I never have magnetized a consumptive or a patient who, having taken [has been taking] mercury,[1] without experiencing, in the former case, pains in the chest, and without feeling, in the latter, pains in the bones, and particularly in the finger-joints and the wrists.

"While magnetizing a young man who had a luxation of the femur in consequence of a lymphatic deposit in the joint, I was seized, on leaving his house, with very sharp pains in the limb on the same side. Believing this to be personal to me, I at first did not give it much attention; the trouble passed away quickly, but on the next day it was the same. Yet, at entering the patient's house, I was not suffering at all; I could not believe in this singular phenomenon, and wished to make sure of its reality, so for two days I suspended the treatment, and felt nothing. I resumed the treatment, my joint was ailing again, and I began to *drag* the leg. I found a pretext for not attending to the case. *I did not at that time know that in magnetizing*

[1] *Sic* in the original: *un malade qui, ayant pris du mercure.* Instances of similar defective grammatical construction are rather frequent in these quotations from authors, and the translator has for the most part retained them in the English version.

without contact the action is of the same efficacy, and that this inoculation[1] *might have been avoided.*

"One day, while making some experiments upon a young man suffering from a syphilitic malady (of the existence of which I was unaware), I held his knees between mine (according to Deleuze's method). After about a quarter of an hour I felt sharp pains in my legs. I asked the patient to tell me whether he himself had pains in the same region; he answered that just then he did not suffer pain, but that usually his suffering was unbearable. I desisted from my experiments, and the pains I had thus 'caught' persisted for a part of the day.

"In consequence of this discovery I have many a time said to patients that I was magnetizing: You have pain in such a part of your body; and every time this proved to be true.

"Having never had any disease, and never having suffered from pain or ache, when I feel some pain in magnetizing I know it comes not from me, and I hold myself sufficiently aloof from the patient to discontinue the facts of this inoculation.

"Other magnetizers have told me of facts of the same kind. I confess that for a long time I refused to believe their testimony and my own as well. This is no longer possible for me, for I have observed too much to harbor a doubt.

"In order to avoid these mishaps I advise the practitioner to magnetize by touch as seldom as possible."[2]

But the absence of contact is no absolutely sure guaranty. Sometimes, though rarely, transmission takes place at some distance in case there has been established between two persons the close and strange relation which we have not yet explained, known as the "magnetic rapport." Du Potet himself cites some cases of this sort:

"*Inoculation without Contact.*—By a singular play of the magnetic forces, and perhaps because of the analogy of two nervous systems, unexpected phenomena sometimes occur. Thus I have many times seen a rapport set up between magnetized subjects that did not know each other, and what one felt was felt by the other, though often they were separated by walls. This makes a good deal of trouble for you, for while you are giving all your care to the patient that is affected sympathically, the other, whom you have left at rest, becomes agitated again and the paroxysm returns, and *vice versa*. In this way hours pass in useless and very fatiguing work; then the hours have to be changed, or you must find some one to take your place with one of the two patients. Do not think that in these cases imagination plays a part. In a hospital in St. Petersburg[3] where two epileptiform nervous affections were given to me for treatment—complaints that I cured, though they were serious and of long standing—well, though the patients were separated by a great distance, and one was on the first floor, the other on the second, the moment I magnetized the one the other had a crisis, yet there was nothing to convey intelligence to the one I did not magnetize; and not once only, but twenty times,

[1] Transfer of disease to the magnetizer.

[2] Du Potet, "Manuel de l'Étudiant Magnétiseur," pp. 251–256. Paris, 1868.

[3] See *Journal du Magnétisme*, vol. i., p. 289.

both at night and in daytime, have we been able to observe this singular phenomenon. My entry was unannounced, made without any noise whatever; often, indeed, the two patients would be in natural sleep; yet, no matter which one I magnetized first, *the one I was not thinking of at all* soon would come out of her sleep and utter fearful shrieks. I permitted this sympathy to go on for a while, for my own instruction, but then I broke it up by producing several artificial crises in succession. Thus I removed the too acute sensibility of their nervous systems."

There was a simpler way, viz.: *forbidding* the somnambule by verbal suggestion to undergo any involuntary action. This recourse is always successful, provided it be availed of in a state approaching monoideism.

"Here is a fact more incredible still, yet no less true. Magnetism is bound for a long time to come to exercise the mind of the physiologist and the psychologist. Facts novel and incomprehensible are coming into notice every moment, owing to the singular properties of the agent employed. I was attending a patient living in the street *des Mauvaises-Paroles*, in Paris. He was but little sensitive to magnetism. But one evening he experienced pretty violent commotions (*éprouva des commotions assez violentes*). I left him resting quietly. The next evening the same phenomenon; but another patient whom I was attending, and who did not know the first at all, had set out for Fontainebleau a few days before. This man, too, was very little sensitive to magnetism. But what was my astonishment, when after three days he came back to Paris, to learn from him that he had experienced violent jerks (*secousses*) at the same hour, the same minute, and for the same length of time. At the moment I made no remark, but that very evening I magnetized this patient. He lived in the street *Coq-Héron;* the other patient, he of *Mauvaises-Paroles* street, had the same nervous symptoms. I ceased and the nervous affection stopped. I resumed the magnetization *at other hours*, and this singular rapport was broken up. I repeat, these men did not know each other at all, and knew nothing of the curious observation they afforded me in this way."

This last fact is not conclusive. If the change of time sufficed to break up the rapport, then no rapport existed. When a phenomenon, apparently inexplicable, manifests itself at a fixed hour, it is nearly always explainable by imagination, conscious or unconscious. Mr. Du Potet does not say expressly that he magnetized his second patient at the same hour at which he had been in the habit of magnetizing the first, but that seems to have been the case. Now, nothing is more common than the coming-on of a nervous trouble at the habitual time of hypnotization. Anyway, Du Potet's observation is recounted too vaguely to be of any service as proof. I have cited it, therefore, only to show the possibility of facile illusion in similar cases.

The following is an observation of Charpignon's:

"We have had occasion (he writes)[1] to operate in a case of acute arthritic rheumatism on the second day of the attack. It is needless to speak of the sharpness of the pains and their continuance for five or six weeks. A few days of magnetization brought about a gratifying alleviation, and the relief would soon have been complete *had not we ourselves been seized with symptoms of the same disease.* This accident taught us the value of the advice given by magnetizers, *to demagnetize* oneself after having operated in certain maladies. We had to suffer then, as on many another occasion, for this carelessness."

The fact, then, is vouched for by many practitioners; still, we must not exaggerate it. It is rather rare, and depends upon a multitude of conditions that make the studying of it difficult. In the first place, there are magnetizers that never have witnessed it. The person that experiences this contagion from time to time, may not experience it in the case of a very serious malady, but may undergo its action very distinctly indeed in some case of little consequence. It seems that here, as in all instances of contagion, individual predisposition counts for more than the agent itself. And in the present instance this predisposition is itself conditional, depending as it does on a certain *momentary rapport* between the patient and the magnetizer. So to speak, the two must be tuned in one key. Magnetizing by passes facilitates this "tuning," but it seldom attains the degree of concord that brings about communication of pains, more rarely produces transmission of objective sensations, and more rarely still thought-transference.

It is generally thought that contagion is always material. That is an error. There are two kinds of contagion, to wit:

1. *Material contagion*, which might be subdivided, but which is not of interest to us here. Its agents are visible parasites, microbes, virulent liquids, and miasmata. (I should be much embarrassed were I asked what a miasma is, but I suppose it is some deleterious gas.[2])

Barring cases of direct communication of the parasite, or direct introduction of the virus into the blood, this contagion is never inevitable; but non-hypnotizable persons are liable to it in the same degree as the hypnotizable; and if anything makes resistance against it, it is the general state of the individual's strength and health (physiological resistance), without regard to his sensitivity. It manifests itself, however, only in a few categories of diseases known as contagious.

2. *Nervous Contagion.*—This is twofold:

[1] *Op. cit.*, p. 179.

[2] This is not exactly Mr. Béchamp's definition, who says that miasmata are "agents whether ponderable or *imponderable*, diffusible, without definite form, of a *physical* or a chemical nature, which, *transported by the air*, are able to modify at many points at once the functionment of that which is anatomically alive in us, the microzyma."—*Bulletin de l'Acad. de Méd.*, p. 1727. 1884.

a. Psychic nervous contagion (imagination, imitation, ideoplasty), from which very many persons are exempt—some 70 per cent.—but which manifests itself in a larger number of diseases (contagious or non-contagious), but particularly in nervous maladies of the cerebro-spinal and ganglionary systems. It is more widespread than one supposes, but it does not, any more than material contagion, enter into the plan of our present study.

b. Physical nervous contagion (communication nearly always by contact, but almost solely in consequence of a magnetic rapport, so-called). It may apply to different diseases, mostly those not materially contagious, but especially to states of exhaustion, general indisposition and pain, and these usually in a very mild form.

These three kinds of contagion, and the first two in particular, of course, in practice, come together. The third may be considered as comparatively unimportant in everyday practice. Nevertheless, it possesses for us the highest *theoretic* value, since from that point of view it constitutes the basis of sympathism in general, and of mental suggestion in particular.

But, unfortunately, we are still far from understanding this basis, on which rest other phenomena still more recondite. Nevertheless, we must do what we can to obtain some sort of a conception of it.

To this end let us look at the question on the reverse side. If *disease* is transmitted by contagion, *health* should be transmissible in the same way. In truth, both express only a relation: they are not things, only states. Health represents harmony of the functions, these being in equilibrium with the influences of the world without. Disease means the opposite of this: it is dysharmony of the functions, these not sufficiently withstanding the influences of the environment. If this be so, then health must be, so to speak, *more contagious* by bodily contact than is disease, being more expansive, in that it re-acts better outward. Only it must not be forgotten that we are looking at things from the physical, the dynamic standing-point.

Now, taking this point of view, that is what we actually see. Apart from material and psychic nervous contagion, a person that enjoys health and strength gives more of good than a person weak and sickly gives of ill. What they call animal magnetism,[1] so far as it is physical action, is nothing but a contagion of health and of force. And, on the whole, the one that is magnetized gains more than is lost by the one that magnetizes. Here the analogy with the loadstone is perfect, and it is pretty evident in the phenomena of attraction, of specific (*spécifiée*) affinity, and action from a distance.

[1] We shall not dispute about words. The word "electricity" (ἤλεκτρον, amber) has no more to do with the batteries and dynamos of to-day than the word "magnetism" with certain physiological actions—rather less. But all words change their meaning with the march of progress, and of this we need not complain.

And if magnetic action in general may be considered as contagion, mental suggestion is contagion also, in a still more striking way.

Bodies when brought together tena to equilibrium of their molecular motions. That is an intelligible law, consistent with all our knowledge, and easily verified in sundry classes of phenomena. Why should organic bodies not come under it, seeing they are far more active, far more expansive centers of force than dead matter? In fact, among these molecular movements produced, that is, transformed within the organism, there are some with respect to which doubt is impossible. Such is heat; electricity also, though less evidently. These two forces, *i. e.*, these two kinds of molecular motion, cannot be circumscribed by any superficies. Heat and electricity are ever escaping at every point, and it were foolish to suppose that though they re-act upon the ambient atmosphere, they shun other organic bodies and are indifferent for them.

Now, animal heat and animal electricity, themselves alone, suffice to account for very many magnetic phenomena. Their weakness, physically, has long deceived us. People have thought that to produce a physiological effect there must be actual fire, or electric batteries contracting the muscles. But the warmth of the hand is much more effective than a blaze, and metalloscopy, the action of the magnet and of very weak electric currents, much more effective than that of strong currents. The more like a remedy is to the normal agencies of the organism, the better it is. And, plainly, nothing more resembles the internal currents that keep up the harmony of the functions than those very currents themselves in a like organism, but one in better equilibrium. On the other hand, we should be surprised were the presence of a living body, *i. e.*, of a complexus of vibrations and currents, to have no influence upon another like complexus. A matter less clear, in the present state of our knowledge, is this specific affinity of certain vibrations of certain organs for those organs only, the transmission from a nerve to a like nerve in another body. But that is chargeable only to our ignorance. Then, in two pianofortes that stand side by side, do not two like strings act in the same way? And when two wires lie side by side and an electric current is passed over one, is not a like current, in the reverse direction, produced in the other by induction, whereas you see nothing of the kind in a rod of wood or of glass? Thus, there is an affinity of nature, and there exists no reason why a nerve that is disordered in its molecular state should not act *by induction* mainly upon a like nerve.

Not to enter upon these questions of elective sympathism of parts, it is plain, as all organic changes may be reduced to changes *plus* or *minus*, that the energy whose intensity is normal, acting upon several associated parts, whereof some have an excess and others a lack of energy, will tend to equalize their tensions—that is, to restore their

equilibrium; and inversely, an association of unequal energies will produce a like break-up of equilibrium in a like association.

"Every living being (says Jussieu, in his interesting report upon mesmerism) is a true electric body, constantly impregnated by this active principle, but not always in the same proportion. Some have more of it, others less. . . . Hence we see why by some it must be given out, and taken in or eagerly imbibed by others; that nearness to the one in which it abounds is of advantage to the one in which it is deficient. The sleeping of a child with an aged person is good for the latter, bad for the former. Plants, when brought together in a seed-plot, are strong and healthy; but in the neighborhood of a large tree they wither and perish."

The latter fact has been confirmed by recent researches, and it is certain that Jussieu judged it aright when he attributed the effects mentioned to absorption of electricity. But what he says of electricity applies equally to *all* molecular motions and to all organic states, though this influence may not be visible save after manifold transformations, due to the influences of the media.

Is the fact of physiological transmission between a child and an aged person empirically ascertained? Hitherto modern science has not concerned itself with these questions; but science in former times looked on the fact as quite natural, and it has a place in popular beliefs. I have heard of many instances of cure, particularly of rheumatic complaints, effected solely by contact with young and healthy persons, or even with young and healthy animals. In one case, too extraordinary to be quoted as evidence, *fowls* served as the remedy, and *they died* after curing the patient! I cite this merely to direct the attention of observers upon a fact of everyday occurrence in rural districts; and physicians are perhaps in the wrong when they treat such stories with contempt. Facts of the kind are found in the history of Hungary. I find the following in Cabanis:

"In general, the emanations of young, vigorous animals are beneficial; consequently they produce agreeable impressions, more or less distinctly noticed. Hence the instinctive attraction whereby we are drawn to them, and which gives us to feel an organic pleasure in seeing them, being near them, even before any thought of a relation of affection or of utility intervenes. The air of stables that contain cows and horses, if they are kept clean, is both agreeable and wholesome; it is even believed—and the opinion is not altogether without foundation—that in certain diseases this air may be employed as a remedy and contribute to the cure. Montaigne tells that a physician of Toulouse, having met him in the house of an aged cacochymic patient whose health he was caring for, being struck with the young man's hearty, vigorous looks (for the philosopher was then hardly twenty years old) bade his patient keep around him persons of that age, whom he deemed to be no less of service in re-animating the old man than in cheering him. The ancients knew how useful it is for languid age and for patients exhausted by the pleasures of love

to live in an atmosphere filled with the restorative emanations given out by bodies young and full of vigor. We see in the third book of Kings[1] that David lay with comely damsels to warm him and to get back a little strength. According to Galen,[2] Greek doctors had long recognized in the treatment of sundry consumptions, the advantage of making the patients take nourishment from the breasts of young, healthy nurses; and experience had taught them that *the effect is not the same when the milk is given after being caught in a vessel.* Cappivaccius saved the heir of a great house in Italy, fallen into marasmus, by making him lie betwixt two vigorous young girls. Forestus tells how a young Pole was cured of marasmus by spending the days and nights with a nurse of twenty years; and the effect of the remedy was so prompt that soon there was reason to fear that the convalescent would again lose his strength with the person that had restored it to him. Finally, to bring this subject to an end, Boerhaave used to tell his disciples of having seen a German prince cured by this means, employed in the same way which had succeeded so well for Cappivaccius."[3]

"There is not a housewife but knows that it is not good for a child to make it sleep with an aged person, though the latter enjoy perfect health. In other times there existed in the mountains of Auvergne a custom that may well be mentioned. When any traveler arrived at an hostelry, feeble, sickly, or benumbed by cold, they asked him whether he wished a warmed or a brasiered bed; naturally his answer would be: 'I want a good warm bed.' When about to get into the bed he would be much surprised to see a chubby, hearty, well-complexioned fellow leave it, enveloped from head to foot in a clean linen shirt.

"The next morning our man would be sure to inquire if it was the custom to give one a bed in which another had slept. 'Sir, you asked that your bed should be warm, and we warmed it for you. If you had wished it brasiered, we would have heated it with a brasier.' 'What difference is there between these two methods?' 'O sir, much difference; the bed warmed by a young, strong, healthy person is far more restorative and strengthening.'"[4]

"When we observe," says Hufeland, "the effect produced by placing newly-killed animals on paralyzed members, and live animals on parts of the body that are suffering pain, it does seem that this therapeutic method ought not to be spurned."[5]

Let us enumerate the facts we have been examining:

1. Transmission of exhaustion, of a nervous fatigue caused by any serious illness or the like. This transmission is rather common, always more or less weakened, often to the advantage of the patient.

[1] Our author quotes the Bible according to the LXX and the Vulgate, wherein I. and II. Samuel are reckoned I. and II. Kings, while I. and II. Kings (as reckoned in the Protestant canon) are III. and IV. Kings.—*Translator.*

[2] "Methodus Medendi," lib. iii., cap. 12.

[3] Cabanis, "Rapports du Physique et du Moral de l'Homme," 3d ed., vol. ii., p. 340. Paris, 1815.

[4] Dr. Pigeaire, "Puissance de l'Électricité Animale," p. 231. Paris, 1839.

[5] Hufeland, "Die Kunst das Menschliche Leben zu Verlängern," p. 7. Jena, 1798.

2. Transmission of health and strength, regulative action of a well equilibrated organism upon another organism that is not well equilibrated. This action is still more common, and takes place sometimes at the expense of the transmitter.

3. Weak transmission of pain and other like symptoms, which enables one to appreciate the state of the patient, sometimes through an exceptional sensibility of touch and smell, sometimes by analogous sympathic sensations in analogous organs.

4. Strong transmission of pain and other pathologic symptoms, communicating an analogous complaint to subjects that are momentarily hyperæsthesic, so as to produce a more or less lasting pathologic state. This transmission is rare, except where there is material or psychic nervous contagion.

CHAPTER III.

TRANSMISSION OF EMOTIVE STATES.

COME we now to the fifth group—*transmission of feelings and emotive states generally.* These kinds of transmission are rather common, but they are seldom produced by simple "influence," in the electro-technic sense of the word. In most cases the ordinary sense-perceptions, those of sight and hearing, aid the direct communication with their automatic inductions, more or less unconscious. We know how easy it is to divine the mental state of a person we know from the expression of his face and the tone of his voice.

As direct transmission alone is what interests us just now, we will examine particularly instances where other influences are more or less thoroughly eliminated.

In the following case the influence of imagination is not excluded, but there is little probability that there was any. "One day," says Lafontaine, the man whose experimental lectures at Manchester suggested to Braid the first thought of his discoveries—

"One day, in magnetizing a friend of mine, Mr. Devienne, a painter, I obtained a result of a kind to show the uncertainty of the existence and communication of the vital fluid. Mr. Devienne was suffering from a headache that prevented him from working, and he suggested that I should remove it. I agreed, but on the condition that he should give me a glass of Bordeaux wine, for I was exhausted and ready to drop from fatigue; I had been magnetizing all the time ever since the morning. He hastened to gratify my wish; I ate a biscuit, drank a glass of wine, and commenced the magnetization. I directed all my action to the brain and the stomach, imposing hands on both organs, and while magnetizing I took a second glass of wine. My patient's eyes were shut and he was unable to open them, but he was not asleep.

After an hour's magnetizing the headache was gone entirely, but my friend's gayety was delightful; he talked incoherently as if he had been drinking. I promptly took him out of the magnetic state, and, to my great astonishment, the effect remained; Mr. Devienne was quite drunk, he could hardly stand. He had taken nothing, and I had drunk only two glasses of wine, of which I felt no effect. My fluid, therefore, had become charged with the spirituous parts contained in the wine, and had transmitted them to the patient, leaving no trace of them in me."

Alongside this narrative I also set an exclamation point some years since. To-day the fact does not seem to me impossible. The case is an interesting one in that the action of the alcohol was transmitted directly without producing any marked effect on the magnetizer.

"Since then (continues Mr. Lafontaine) I have many a time in my own practice and in that of other magnetizers come upon this fact of the transmission of physical sensations. I have also seen transmissions of moral sensations (*sensations morales*); the patient would become downcast or joyous, just as he became a sufferer if the magnetizer was indisposed or preoccupied. It was not even essential that the patients should be endormed to experience these different physical and moral effects, it sufficed if they were powerfully magnetized; nevertheless, it must be understood that these were rare instances, very rare indeed, and they were developed only in the case of exceptional individuals." [1]

I would observe that in the case of Mr. Devienne transmission took place in a state intermediate between sleep and waking. Now, it will be remembered how in the case of Mrs. M., who discerned the moral state[2] of persons around her, this phenomenon manifested itself always at the moment of awaking. Nevertheless, somnambulism being a highly variable, a highly elastic state, the conditions of monoideism may be realized therein momentaneously, and then the same phenomenon may occur.

Baragnon gives a case in all respects like the foregoing, and in which the subject was in perfect somnambulism.

"On leaving the table after a dinner at which I had become a little heated [with wine], I was invited to magnetize a young person who was passing the evening at the same party. I brought about sleep with singular energy of action. This I attributed to my excitement, though that seemed to me to be very slight. I was still more astonished to discover in the magnetized person, when she was in the somnambulic state, the most unmistakable signs of intoxication. No one guessed the cause, as I seemed perfectly sober; but, surprised as

[1] Ch. Lafontaine, "Mémoires d'un Magnétiseur," vol. i., p. 96. Paris, 1866.

[2] I doubt whether "moral state" expresses the meaning of *état moral*. But let the reader attach the same meaning to "moral" in this phrase that it bears in "*moral* courage." The word is used as the antonym of "physical." "Moral state" here means the thoughts, sensations, emotions, etc., present in one's mind at a given moment.—*Translator*.

I was myself, I explained this wonderful effect of transmission, producing intoxication in a delicate woman, who was incomparably more sensitive than a man could be to the effects of spirituous liquor." [1]

Here, then, is another case of involuntary transmission, with apparent amplification due to the sensibility of the subject. But it is probable that in these cases psychic contagion played a certain part; in other words, that the subject thought to herself that she was dealing with an intoxicated man, judging by some symptoms more or less faint, and that in a moment of monoideism this idea was realized in herself by ideoplasty.

"Transmission of sensations (says the same author) extends over the two beings through a general and sympathic harmony. The moral impressions of vexation, anger, joy, will be perceptible to the second party *as physical re-action*, if they affect the first party. This organism, wholly controlled in body and mind, will note *far better than I* who am in control, the slightest differences in opinion of the persons around me with regard to myself and my experiments and to magnetism. Is this so because, receiving one after another all my sensations, she analyzes them better than I could do, in the recollectedness [2] which this demi-separation from matter always procures for her?"

To say nothing of the "separation from matter," which is only a phrase, we can understand why the subject should perceive relatively better, and that for two reasons: first, because the subject is *hyperæsthesic;* and secondly, because the subject is *isolated.* The subject is *hyperæsthesic*, that is to say, an excitant insufficient for the magnetizer may be overpowering to the subject. There is no real amplification in nervous transmission, as there is none in any other sort of transmission; but sometimes there is apparent amplification, as for instance in the case last cited of transmitted intoxication. It is as though we were to transfer a burden that we can bear very easily, to the shoulders of another person who is too weak to bear it. The subject is *isolated*, that is, his mind is not distracted; he perceives better whatever is in rapport with the sphere of his occupation for the moment, and he takes in better than we do the meaning of a tone of voice, of a laugh, of a word that escapes from the lips of one in the company. He need not "analyze" his sensations, it is enough that he is *under the action of associations based on unconscious experience.*

[1] P. Baragnon, "Etude de Magnétisme Animal sous le point de vue d'une exacte Pratique," p. 136. Paris, Toulouse, 1855.

[2] *Recueillement.* Webster gives to the word "recollection" as its fourth meaning a sense very nearly the same as that of the French word, but he marks it "rare." The term comes from the theology of the Mystics and of writers on the "spiritual life," and with them means a state of abstraction of the faculties of the soul from all created things and their concentration upon the objects of religious contemplation.—*Translator.*

Baragnon, I am aware, would object that the subject being isolated cannot hear "strangers."[1] But the phenomenon is a complex one. The subject hears only his magnetizer, that is to say, answers the questions of his magnetizer only, and it may be said that he does not really hear, in the proper sense of the word. But it is a mistake to suppose that extrane auditory sensations are totally inactive. *They enter the brain*, and then results a phenomenon that I may call *latent hearing;* impressions entering thus (I do not say *perceived*) form associations as all other impressions do, combine together, and give resultants that may at a given moment make their appearance amid other and more intense states.

If lucidity (I do not say clairvoyance, but lucidity as the faculty of reflecting),[2] the lucidity that belongs to active somnambulism, must be regarded as unconscious because of the total forgetfulness on awaking,[3] then the latent sensations that are not perceived in somnambulism, but which enter the brain and there produce an action in all respects resembling the habitual actions, though unaccompanied by reflex acts; these actions, I say, must be regarded as *a second grade of unconsciousness*. Below consciousness are even *several strata of unconsciousness*.

This is proved by a long series of facts, and I go so far even as to say that hypnotic phenomena in general would be more or less incomprehensible without this graduation of the intelligence. Let it for the time being suffice that we derive from these reflections a practical lesson, to wit:

Whoever would experiment to any purpose *must always consider the endormed subject—even in the state of profound aideia, and despite all ordinary evidences of total deafness or blindness—as though awake.*

And "beware of suggestion!" This counsel of Mr. Bernheim ought to be writ in big letters on the walls of all hypnotic laboratories. Mr. Bernheim, however, does not believe—at least did not yet believe in *mental* suggestion when he wrote his treatise. Scientific hypnotizers little think that when they experiment on a highly sensitive subject they inculcate into him their theories, their knowledge (*connaissances*), their fears, even their guesses, and that thus they are tricking themselves while they think they are making discoveries.

[1] For the somnambule *strangers* are all persons with whom he is not "in rapport." In this translation the word *extrane* will be used to express the French adjective *étranger*, as a technical term in magnetism.—*Translator*.

[2] *Réfléchir*. This ambiguous word seems to be used here in the sense of "giving back" (after the manner of a mirror); not in the sense of "considering," "pondering."—*Translator*.

[3] We have no other criterion for determining whether a thought or an action was unconscious or not, save *the possibility of recollecting a few minutes after*. It is vain to look for any other.

Phenomena are summoned as the exorcists of Loudun summoned the devil. So, then, beware also of mental suggestion !

Mr. Baragnon, who was an excellent practitioner and often a very clear-sighted observer, himself points out certain illusions of this kind, and we will quote his remarks presently, when we treat of transmission in detail.

A state very favorable to transmission of feelings and emotions is also easily produced in the hypotaxic phase—that is, in the state which results from passive concentration of the attention before hypnosis, properly so-called, makes it appearance. So this, too, is a state intermediate between sleep and waking. It is often brought about in persons who, while holding their hands upon a table, wait patiently for it to begin tipping. Again, people amuse themselves in company by putting to the "spirit" (*i. e.*, to the medium's unconscious) questions touching the psychic state of those who are present, and thus are discovered not only the good or bad humor, the fears, the cares, the trustfulness or the incredulity of those who are in the company, but also their inclinations, their sympathies, their antipathies.

This phenomenon was very common in the possessed and the demoniacs of past times, and of course was then explained by the intervention of the devil. Here are some instances from the history of the nervous epidemic of the Shakers (*Trembleurs*) of the Cévennes —an epidemic that broke out among the Protestant fanatics in that mountain region of France after the revocation of the Edict of Nantes.

a. "Two boys in ecstasy discerned down to the smallest circumstances what John Cavelier had in his mind. It was just these facts that won him for the revolutionary cause, and, as we know, John Cavelier became thereafter the principal leader of the Shakers.

b. "A crisiac[1] discovers that a man present in the assembly has betrayed them for a sum of money. He goes straight to the culprit and indicates that he has poison hid in the sleeve of his jacket. All this proved to be true; 'I was there,' adds the person who tells the story, 'and I saw it all.'

c. "Another crisiac discovers in the midst of a meeting of 400 or 500 Protestants, two spies, who confess their crime. His name was Clary, and to prove the truth of what he had said, he offered to go through the ordeal of fire, and in fact did. Thus he gave proof of *insensibility* after giving proof of *hyperæsthesia.*"[2]

"As for the Convulsionaries of Saint-Médard (victims of another nervous epidemic appearing about the year 1770, among the Jansenists, at the grave of Deacon Pâris), this is what is said of them by Mr. Poncet, one of the ablest writers on their side (Poncet was so moderate in his assertions that even his opponents said he wrote *pro* and *contra* the Convulsionaries): 'You would have much less difficulty,'

[1] *Crisiaque* (from *crisis*), one that is in the magnetic or hypnotic crisis, or in somnambulism, etc.

[2] "Théâtre Sacré des Cévennes," pp. 38, 45.

he says, in replying to the author of 'Nouvelles Observations,' 'had you witnessed the facts; if being in the company of a Convulsionary, he had told you the most secret thoughts of your heart; if he had warned you against some serious mis-step and you had taken it; if he had pointed out to you just the moment for electing the better part, and you had preferred a less suitable course: if this thing and other things equally well defined in detail, had happened to yourself, you would have been upset and could not have refrained from acknowledging that such warning came from God.' The author of 'Lettres d'un Ecclésiastique de Province,' whose work bears the unquestionable stamp of truth, also declares that 'there are innumerable instances of Convulsionaries discovering in fullest detail the secrets of hearts.' In a writing entitled 'Coups d'œil sur les Convulsionnaires' (p. 8), we read that in many crisiacs the supernatural and the divine are manifested by indubitable signs; among these signs is *manifestation again and again of the secret conscience.* So we find in the heart of Paris, among cultivated theologians, 30 years after the scenes in the Cévennes, the selfsame marvels that had before been attested by uneducated peasants; and these Jansenist theologians assuredly did not seek to liken themselves to persons possessed, or to Protestants, heretics."[1]

In the facts just cited, transmission of thoughts is blended with transmission of feelings; the latter is by far the more common.

A case similarly complicated was observed by Charpignon. He was attending a married lady and encountered sundry remarkable phenomena:

"The lady's husband, at first unbelieving, took so to heart the extraordinary phenomena he witnessed that he became morose. He now thought only about the great questions of man's destiny, and evidently having a tendency to melancholia, he fell into a state of profound excitation, and even thought of blowing out his brains, the more quickly to attain full knowledge of things. He had sense enough, however, to conceal from his wife and family the thoughts that possessed him; he even retired to another apartment.

"All this time the thoughts of the somnambule reflected the mental troubles of her husband. Excitation followed depression, and she suddenly exclaimed, 'Yes, if I had a pistol I'd blow my brains out!' The husband having entered on hearing the cries of distress, 'Listen,' said the somnambule to him; 'you must live, and you have been cowardly enough to wish to die.'" The author adds the following reflections: "Serious worry or deep grief may have the same disastrous results as a disease. The patient feels the sufferings of the magnetizer with all the more pain *as he knows not to whom to attribute* the frightful overturning that oppresses him."[2]

It is to be remarked that in this case it was not the magnetizer, but a third person, that was the cause of the trouble—a third person united

[1] Bertrand, "Du Magnétisme Animal," p. 436.

[2] *Le bouleversement affreux qui l'opprime.* Dr. Ochorowicz gives no foot-note reference to show where the passage is to be found; and though the whole is enclosed between quotation marks by him, some of the remarks, for instance, "The author adds the following reflections," would seem to be his own —*Translator.*

only to the somnambule by the ties of sympathy and of life-association. On this point Deleuze says:

"The action of one individual's thought upon another is still an inexplicable phenomenon, but our thoughts are communicated by speech and by gesture—that is, by sound and light. How know we but that the modifications of our soul may be made sensible by other means? Whence the feeling inherent in human nature, that makes us wish that an absent friend shall think of us? Magnetism gives to this wish a new motive; even explains to us how he who is thinking of another and for his good, acts upon him; and how, rapport once set up, *whether by affections and habitudes, or by physical means*, there may exist communication between two beings that are compelled to live apart from each other. And again, must we not seek in a like principle for the origin of the opinion diffused through all peoples, that wishes have an influence on the health, the well-being of those who are the objects of them; as also for the origin of the opinion so dear to sensitive souls, which leads children to desire and to receive their father's blessing? I do not want to urge these thoughts too far; I hold that though they please the imagination and the heart, and though they account for many of our inclinations, they are not sufficiently proven to be proposed to the reason. I will simply remark that philosophy would gain a good deal could we reduce under natural and physical laws, facts that have the appearance of the marvelous, and which, nevertheless, are attested by enlightened men. It is not the belief in these facts, but the consequences we draw from them, that are the cause of superstition. Say what you will, you never will persuade those who are convinced of the reality of these phenomena, whether by experience or by trustworthy testimony, that they are dupes of an illusion. Compel them to keep silence for fear of ridicule, and they will be none the less ready to attribute these things to a supernatural cause; they will then look on the principles of the sciences and on those who measure everything by those principles, as a system and as men who see only the rind of things. Better were it to bring all the wonder phenomena within the physical order, and to distinguish clearly what truth they may contain from what is actually inadmissible."[1]

These very just remarks may well give matter for reflection to those who understand one thing only—the inviolability of accepted truths. As for Deleuze's suppositions with regard to popular opinions, they are equally just in principle.

I venture to go further, and to say that the human mind is too little inventive to originate any prejudice[2] whatever, with no empiric basis. The question simply is, where does the basis end and where is the beginning of the complementary imagination and of the errors that come from our forgetting the origin of it all? But as for the practical importance of these real facts, it can by no means satisfy the

[1] Deleuze, "Histoire Critique," etc., vol. ii., p. 327. Paris, 1813.

[2] The word is used here in its etymological sense—a *judgment* formed *before* knowledge is had. *Præjudicium*—forejudgment. Just above I have rendered *préjugés*, "popular opinions."—*Translator.*

aspirations of "sensitive souls." The facts of unconscious communication, which may be frequent enough, are quite lost in the torrent of normal impressions and associations; and the facts of definite, experimental communication are so rare that they cannot have any practical value till we shall discover *all the precise conditions* of their physiological manifestation.

But we return to the facts. One must never be troubled about applications when there is question of a new theoretic truth. Let us accumulate facts in order to frame a sound theory; the application will come of itself. Meanwhile this truth embarrasses us sometimes.

"It has happened often to me (writes the Count de Maricourt) to be flustered and embarrassed by the clairvoyance of somnambules in perceiving impressions or divining feelings that I should have wished hidden from them."

I do not question the fact, but the adverb "often" is perhaps too strong in this passage.

I might quote several facts of the same kind; but because of their personal and complicated character it were difficult to tell the tale without entering upon many explanatory details that would overload our study and perhaps add nothing that would be convincing to the unbeliever.

This sort of facts one must observe for himself and keep for his own instruction. It is not to be supposed that a "clairvoyant" somnambule is all the time discovering or reproducing your sensations. In the first place, the somnambules that discover them are rare, and they cannot do this thing every day. As with all transmission phenomena, there are moments—quarter hours at most—during which transmission takes place.

This is true particularly of clear, experimental transmissions and of *detailed sensations*. We are already familiar with some of these facts, as observed in Mrs. M. and Mrs. B. Let us now look at observations made by other experimenters. We begin with some remarks from Baragnon:

"Before devoting oneself to the study of the moral and mysterious union that is formed by the nerve-fluid between two beings, it is well to apply oneself to the observation of facts which disclose a no less abnormal and miraculous closeness of relation (*intimité*) between two bodies.

. "Profoundly attached to the physical facts, because I believe it is they that will save magnetism from the destruction that time works, till the minds of men are opened to it [Baragnon wrote in 1853], I see in the fact of the transmission of sensation a new lever against resistance.

"What is this intimate communion of two natures so that the slightest pains, the most diverse physical impressions, being felt by the one are echoed by the other . . . by the other, whose senses are in

abeyance, whose means of perception are effaced? [This effacement is only relative.] We cannot explain such facts; they are found to exist, and that is all. If the magnetizer feels an impression, that instant the somnambule feels a like commotion. If, for instance, you prick the operator's arm so as to cause him pain, the subject will show signs of pain, and will always tell correctly the part that was hurt, whether by burning, or by pricking, or by a blow.

"If the magnetizer is sufficiently stoical to withstand every painful impression, the subject feels nothing or next to nothing. So, as regards smell and taste. If I find the odor of ammonia, ether, or any other smell, the endormed person will name the odor, for he, in fact, will sense it too. Still, this is a fact that must not be confounded with thought-transference."

That is a just remark. There are subjects that take the sensations of the operator without being influenced by his thoughts, and inversely; and with the same subject one of the two phenomena may show itself without the other. Sensations are generally transmitted in a monoideic state, in which *imitation of movements* exists also, while transmission of thoughts seems to require a monoideism a little more passive and, at the same time, a little more absorbed; it is, perhaps, a little nearer than the other to polyideism, while the state that favors will-transmission seems more passive still and nigher to aideism.

The same author makes another just remark with regard to mental influence during experiments in general:

"Let us say upon this point, that if we are trying tests of insensibility upon the magnetized person, and while we are making burns (*opérons brûlures*), suppose we feel some impression of what we are doing—a feeling of repugnance and dislike for committing such *cruelties*—the patient, in virtue of the transmission of sensation, will shudder, too, not from pain, for there is none, but because of the sentiment of pain in us. From this one can judge whether our advice, so often repeated, to keep calm and cool, is of much importance. The re-action of the magnetizer on the subject, in these conditions, is the prime source of the cure, as in the opposite state it is the mainspring of the disturbing principle" (p. 134).

A very just remark. At the time (1845) a sharp controversy was proceeding in journals devoted to magnetism, upon experiments in insensibility, in particular between Mr. Lafontaine, who gave public exhibitions of such experiments, and Mr. Brice de Beauregard, who held them to be infamous, among other reasons, because of the suffering endured by the somnambules at awaking or afterward. Till lately I have been unable to understand this polemic. I have many a time experimented upon the insensibility of somnambules; on many persons I have, with their permission, inflicted all manner of seeming tortures—punctures, burning with melted wax, etc. With punctures, even deep punctures, I have never had the least mishap; in two cases of burning, where a surface of several square centimeters was

involved, melted wax being used in one, red-hot iron in the other, the process of inflammation took the usual course, but without any suffering at all either during the sleep or after. Hence it was with great astonishment I learned that some magnetizers find their patients suffering more or less pain after awaking. Now I know why. After my first experiment, which succeeded perfectly, I felt fully assured that the subject could not suffer at all, and this assurance I suggested effectively to my subjects; whereas operators who have begun with a mishap always thereafter have a fear, an emotion, an uneasiness, a needless compassion, which influence their subjects. Nay, more; the most humane man of all magnetizers, the man morally most susceptible, namely, Deleuze, *never could produce insensibility;* and yet, according to Esdaile, Baragnon, Lafontaine, Du Potet, and others, anæsthesia is one of the most constant characters of nervous sleep! Deleuze, after quoting several cases of insensibility vouched for by physicians, says:

"*My somnambules never presented it;* their sensibility was, on the contrary, *more delicate* than in the waking state; the contact of a body not magnetized was disagreeable to them, and the touch of an extrane person gave them much annoyance. *I even know for certain of patients falling into convulsions and awaking because of being touched suddenly by someone not in rapport.*"[1]

All this is true, but the opposite side is in the right also.

One produces insensibility when one is sure that it will be produced. And so with respect to all other phenomena, symptoms, states—account, of course, being made of the subject's hypnotic sensibility.

"One day," says Perronet, "I fancied that a subject was fatigued and that the attitudes taken by him, counter to the laws of gravity, must exhaust his muscular strength. Straightway, at the very instant of this reflection—an erroneous one, no doubt—I saw his limbs relax and become inert and flabby; when raised and let go, they fell like lifeless masses, or like the arms and legs of Policinello. . . . After four or five minutes, in a moment of ill humor, I had a strong will to revive in the subject the properties belonging to the cataleptic state; and I had the satisfaction of succeeding. From this experience I concluded that in the phenomena of catalepsy all depends on volitive or intuitive direction on the part of the operator, regard, however, being had to the subjective predisposition of the catalepsied subject."[2]

It may be remarked that Mesmer, a man of nervous, irascible temperament, and who despised somnambulism, seldom produced it, while he nearly always produced the convulsive *crises*, which he regarded as necessary; that Puységur, calm and of a kindly disposition, rarely produced spasms, and nearly always somnambulism; that the forceful Lafontaine produced profound and lasting states; that if the

[1] Deleuze, "Instr. Pratique," p. 139.

[2] Perronet, "Du Magnétisme Animal," p. 15. Paris, 1884.

credulous Billot did but obey the spontaneous divagations of his somnambules, Donato, full of self-confidence, controls them like trained animals; that if many magnetizers recommend the deepest stillness, so as not to delay the coming on of the sleep, the priest Faria and General Noizet brought it on by shouting "Sleep!"; that if some magnetizers fail to produce suggestions, the Nancy school acts solely by suggestion; that if the regulation three states[1] exhibit themselves daily at the Salpêtrière, that happens rarely elsewhere; that "the cause that makes, unmakes," rarely, however, anywhere save at the Pitié.

It is as with new remedies, which act efficaciously only while they are the fashion—"Hurry up, for it is curing folks now!"

But, then, is it all illusion, and does it all depend on the sensations, feelings, beliefs of the operators?

No; there is truth in all these conflicting observations; only one must not generalize too much; we must not give way to a first impression, or work ourselves into an enthusiasm for an impossible idea, for an observation that perhaps has no better foundation than chance or peculiar circumstances.

One needs to preserve in the current of research *neutrality of feeling*, for all your rather bold guesses have an echo in the highly sensitive subject, and they lead you astray. Do not forget that you are not dealing with a comet, which does not trouble itself about your telescope, nor with a chemic combination, which, while undergoing the action of your reagents, is concerned no further with them.

What would be thought of a physicist who, wishing to make a nice galvanometric test, should load his pockets with chunks of iron or with magnets?

Let us go back now to our sheep. Here is an observation of Mr. Peter Janet:

"Mrs. B. seems to feel most of the sensations felt by the person that has endormed her. She believed she herself was drinking when that person drank. She always knew exactly the substance I put in my mouth, and distinguished perfectly whether I was tasting of salt, or pepper, or sugar."[2]

And in his last note[3] he adds the following:

"We have noticed that the phenomenon keeps on, even though I be in another room. . . . If, even in another chamber, I pinch myself strongly on the arm or the leg, she cries out and is angry because she, too, is pinched on the arm or on the calf. Finally, my brother, who was present at the experiments, and who had a peculiar influence over her, for she confounded him with me, tried a curious experiment. Going into another room, he made a severe burn on his

[1] Catalepsy, somnambulism, lethargy.—*Translator.*

[2] P. Janet, "Note sur quelques Faits de Somnambulisme" (*Bull. de la Soc. de Psych. Physiol.*, 1885, 1 fasc).

[3] *Revue Philosophique*, No. 8, Aug., 1886.

arm, Mrs. B. being at the time in that state of *lethargic somnambulism*[1] in which she takes mental suggestions. Mrs. B. was crying out wildly, and I had difficulty in restraining her. She had hold of her right arm above the wrist, and complained of suffering greatly there. Now, I did not myself know exactly the spot at which my brother had intended to make the burn. *It was at that part.* When Mrs. B. was awakened, I noticed with astonishment that she still held her right wrist and complained of suffering greatly therein, though she knew not why. *The next day she was still treating her arm with cold-water compresses*, and in the evening I found a swelling and a redness, both very apparent, at the exact place on which my brother had made the burn on his arm; but it must be remarked that during the day she had touched and rubbed the arm. . . . This phenomenon of communication of sensations appeared only after a long series of seances and at the end of one that lasted several hours; therefore I have never seen it again presented with the same definiteness."

I was not present at this experiment, but I saw the burn on Mr. J. Janet's arm—a large burn and one that must have been very painful. Similar facts have long been observed by magnetizers, for example:

"The phenomenon of transmission of sensations from the magnetizer to the magnetized (says Lafontaine) was one day manifested at Clarisse's. I then went down to the floor below with two persons, who inflicted a thousand little tortures on me—pulling my hair, tickling, pricking, and so-forth. When we went upstairs again, we were told that the somnambule had indicated all these sufferings in the order in which they had been inflicted on me. *This is one of the phenomena I have seldomest come across.*"[2]

Among recent experiments are to be mentioned those made by the London Society for Psychical Research, which has done so much to advance the study of these delicate questions of psychology, hitherto entirely neglected:

"*Community of Sensations.*—We come now to a question much debated and very open to discussion. We hold—and here we have the support of the previous experimenters—that we have often observed a truly remarkable *community of sensations* between the operator and his subject—a phenomenon that perhaps might more correctly be called transmission of sensations. This phenomenon is nearly allied to those with which the committee on thought-transference is concerned. But our experiments differ from those made by the latter committee in this, that the subject is not in his normal state, but is in the 'mesmeric sleep.' The experiments were conducted as follows: Frederic Wells (the somnambule, a young man of twenty years) sat in a chair with his eyes bandaged, and Mr. Smith stood behind him. The subject was put to sleep by Mr. Smith by the use of passes. Mr. Smith was then pricked or pinched pretty hard on different parts of the body, this operation lasting generally a

[1] "Lethargic somnambulism" is a contradiction. The state in question was one intermediate between aideia (lethargy) and polyideia (somnambulism), in other words a monoideic state.—*Note by Dr. Ochorowicz.*

[2] Lafontaine, "Mémoires," vol. i., p. 157.

minute or two. Absolute silence was observed, barring the necessary question, 'Do you feel anything?' This question was pronounced by Mr. Smith, for the subject seemed not to hear the other persons. In the first set of experiments Mr. Smith held one of the subject's hands, but that precaution having afterward been found useless, all contact between operator and subject was broken off in the subsequent experiments."

First series, January 4, 1883:

1. The upper part of Mr. Smith's right arm was pinched several times. About two minutes after, Mr. Wells began to rub the corresponding part of his body.
2. Back of neck pinched. Same result.
3. A blow on the calf of left leg. Same result.
4. Lobe of left ear pinched. Same result.
5. Back of left hand pinched. Same result.
6. A blow on the upper part of the back. Same result.
7. Hair pulled. Wells locates the pain in his left arm.
8. A blow on the right shoulder. The corresponding part indicated exactly.
9. Back of left hand pricked. Same result.
10. Back of neck pricked. Same result.
11. Left great toe squeezed. No action.
12. Left ear pricked. Corresponding part indicated exactly.
13. Back of left shoulder struck. Same result.
14. Calf of right leg pinched. Wells touches his arm.
15. Palm of left hand pricked. Corresponding part indicated exactly.
16. Neck below right ear pricked. Same result.

Thus we find in 16 experiments 13 successes and 3 failures.

In the second series of experiments, Wells's eyes were bandaged as before; but, furthermore, there was a screen between him and Mr. Smith. For a while during the experiments Mr. Smith was in a neighboring room, separated from his subject by a thick curtain.

Second series, April 10, 1883:

17. Upper portion of Mr. Smith's left ear pinched. After about two minutes Wells exclaimed: "Who is pinching me?" and began to rub the corresponding part.
18. Upper portion of left arm pinched. Wells indicates the spot almost immediately.
19. Right ear pinched. After about one minute Wells struck his own right ear, as though brushing away a fly, exclaiming, "Won't you leave me alone?"
20. Chin pinched. Wells indicated the place almost immediately.
21. Hair pulled. No action.
22. Back of neck pinched. Wells pinched the corresponding part soon after.
23. Left ear pinched. Same result.
24. Salt put in Mr. Smith's mouth. Wells exclaimed: "I don't like to eat wax candles"—an idea no doubt suggested to him by the words "wax candles" uttered in his hearing a few minutes previously.

25. Some ground ginger given Mr. Smith. "I don't like things that burn. Why do you give me pepper that way?"

26. Some salt. "What disgusting stuff is this?"

27. Some wormwood. "You hurt my eyes; I do not like mustard."

(It is to be remarked that in the last two experiments the taste of the ginger continues, and is confounded with the new sensations.)

28. The calf of the right leg pinched. Wells becomes angry and refuses to speak. At last he stretches forth the right leg violently and rubs the calf.

After this experiment Wells becomes quite angry and will no longer answer any questions, saying that were he to answer people would keep on pinching him. (During this time the calf of Mr. Smith's left leg was continually pinched.)

Thus in twenty-four experiments on touch there were twenty successes. Of the four checks two might have been foreseen, for transference is seldom produced by pulling the hair. Once the response was not given, and once only was it false.

The report is signed by Messrs. W. F. Barrett, Edmond Gurney, Frederic W. H. Myers, Henry N. Ridley, W. H. Stone, George Wyld and Frank Podmore.[1]

To this report it might be objected that for a good deal of the time the co-operation of the hearing of the subject was not excluded. But that objection cannot weaken the general impression made by the experiment; that is fairly conclusive. Besides, other series of experiments were made for three years, and always gave similar results.

But how is it possible for the pain of the operator not only to be felt by the subject, but even to be *localized* so exactly? However extraordinary this may seem, it is not, I believe, unintelligible.

If, in order that the transference may take place at all, there must be a sort of *regulating;* if the *tonic movement* of the subject's organism has to be brought into accord with the tonic movement proper to the organism of the operator—this by means of repeated touching, passes, etc.—the special regulating of the corresponding nerves is given in advance. We may suppose that there are differences among the several parts of the organ of touch, and that one part, a, accords better with a corresponding part, a', of another organism than with the parts b', c', etc. We do not know wherein this difference consists—it may be very complex—but suppose there exists in the analogous part only one analogous character: that of a determinate *resistance* for certain currents. Now, there are found among physical phenomena dependences of this kind.

Remember, first, that, as here in *physiological sympathism*, so in *physical sympathism*, direct contact is not necessary. A magnet will magnetize from a distance a piece of steel, without producing any

[1] "Proceedings of the Soc. for Psych. Res.," vol. i., part 3., July, 1883.

perceptible action on other metals. Soft iron, too, is magnetized, but only for the moment. We might say that if we liken the magnetizer to a magnet, somnambules that feel his action slightly are comparable to iron, while those that are affected by it for a certain time may be compared to steel. We know that if a magnet undergoes a change in its molecular energy, its armature, at a greater or less distance, feels the change in the same degree.

Then, it is known that as there are electrostatic machines that produce electricity by direct friction, so there are others that charge themselves and produce electricity "by influence"—*i. e.*, without contact. The comparison is not entirely exact. But substitute galvanism in place of electricity. In galvanism not only is contact not necessary, but no poor conductor can prevent the phenomena of *induction*—that is, of *physical sympathism*. A wire insulated as thoroughly as possible, and even at some distance from another wire, will produce in the latter a corresponding current so soon as it is itself traversed by a current. So inevitable is this phenomenon that it forms the principal obstacle to telephonic communication. If upon the same poles are suspended telegraph wires, though a meter or more distant, there will be heard strokes (*coups*) in the telephone at each interruption of the telegraphic current; and even telephonic currents themselves alone, when brought together on many wires in a central station, get mixed by induction.

Suppose, now, that the wires, instead of being stretched in a right line, are coiled as though wound on a bobbin. A bobbin having a certain number of coils presents greater or less resistance.

The bobbin constitutes the essential part of a telephone. Take a telephone circuit, longer or shorter, uniting two stations. At each station are two telephones interposed in the circuit, but while the bobbin of telephone *a* has a resistance of 300 ohms, that of telephone *b* has only 3; so, too, telephone *a'* has high resistance, and telephone *b'* very low resistance. You employ as transmitter telephone *a*, into which you speak; your words will be transmitted, and you will be heard distinctly at the other station, *but only through receiver a'*—receiver *b'* will be mute or nearly so, according to the degree of difference in quality of the wire, the number of coils, etc. So, too, if the answer is given through *a'* you will hear only through *a*.

And yet all four telephones are on the line.

They may also not be in contact; the bobbins may be simply placed side by side, and you will obtain *by induction* the same result.

I do not mean to force the analogy, which is but partial.

The phenomenon is always comparatively much more simple in a complex of bobbins than in an aggregation of cells.

The currents in the organism may not be all alike. They may even present a great number of differences as regards their nature, velocity,

amplitude, intermittence, etc. But it is none the less comprehensible that the excitation of a certain determinate *modus* will be more easily echoed, and chiefly by an organ susceptible of like vibrations.

Not to enter into details concerning these nerve-vibrations, of which we are ignorant, we may state the question thus:

Are there electric currents in the nerves? Yes! Have the electric currents the property of self-induction at a distance despite all sorts of obstacles? Yes! Is this induction always palpable? No! For that purpose we require instruments of extreme sensibility: to wit, good subjects. Is there a constant relation between excitations of nerves and the electric currents of those nerves? Yes!

Well, it is enough that a given excitation of nerve A, accompanied by electric change *a*, produce by induction a like change *a'* in a distant nerve A', to make that nerve reproduce the given excitation, in virtue of the principle of *inter-organic* associations mentioned above.

Nor is it contrary to reason to hold that this transmission, or this induction, may also be direct, that is, even without the intervention of electric currents; the nerve-currents may equally induce themselves.

Hence, there is no need of supposing a new force to make these phenomena comprehensible; we have only to broaden and to subtilize a little the properties of known forces and the laws of re-action, which are probably inherent in all natural motions.

Finally, we must not forget that precise localization is very rare. There are subjects that distinctly feel the pain in a corresponding organ, *but not on the same side*. It seems that in that case induction acts on the more sensitive side, or on the *nodi minoris resistentiæ*.

CHAPTER IV.

TRANSMISSION OF IDEAS.

WITH the transference of sensations we quit the region of sympathic localization. *Ideas* are not localized.

Here, of course, as everywhere, there are degrees.

Sensations of sight and hearing have less local relation with their organs than have sensations of touch, but they are so akin to ideas properly so-called that there is no use in treating them separately. If I transmit the sense-image of the king of diamonds while gazing at it or simply imagining it, there will be only a difference in the degree of clearness of the representation, whereas in tactile sensations, which we have been considering, the *emotional element* made a marked difference.

In the sphere of ideas, therefore, we shall look for a more subtile action, and we may expect that direct, clear transmission will be still rarer there.

The reader will recall the experiments made with Mrs. D. (p. 51, *seq.*, *supra*), but it is to the English Society for Psychical Research in particular that the honor belongs of having conducted a great number of studies of this kind, made with remarkable precision and perseverance. These must be regarded not only as the starting-point in the study of mental suggestion, but in general as a new impulsion given to psychological science as a whole. There is no doubt that they mark a new era in modern psychology.

In sundry of my works in the Polish language, and particularly in a study upon the actual state of psychology, published in 1881 in Mr. Ribot's *Revue Philosophique*,[1] I showed the absolute necessity of *collective work* in psychology. The English Society was the first to undertake it, and we see what enormous strides we have made in these last years!

The results of the English Psychical Research Society upon mental suggestion are contained in four reports of a special committee, on which were Messrs. Edmond Gurney, F. W. H. Myers, F. Podmore, and W. F. Barrett, Professor of Physics in the Royal College of Science for Ireland. Experiments have also been made by Mr. Henry Sidgwick and Professor Balfour Stewart. They were carried on at Buxton, Cambridge, Dublin, Liverpool, etc. Everywhere the result was the same: verification of the existence of the phenomenon. The following table shows the ratio of successes in the early series:

WITH MENTAL SUGGESTION.		WITHOUT MENTAL SUGGESTION.	
1 success in	1½ exp.	1 success in	52 exp.
1 "	3¾ "	1 "	90 "
1 "	13 "	1 "	52 "
1 "	12½ "	1 "	90 "
1 "	10 "	1 "	52 "
1 "	3½ "	1 "	12 "
1 "	2 "	1 "	4 "
Mean	1 in 6½	Mean	1 in 46

The experiments were made with playing-cards, objects of different kinds, names, and numbers. But the most interesting results were obtained with drawings. In volume i., part 3, is given a series of demonstrative tables.

My experiments with drawings have been much less striking, and I believe that in this and in other respects there are great individual differences, particularly between subjects, but also between operators.

[1] "Projet d'un Congrès International de Psychologie." (*Rev. Phil.*, vol. xii., pp. 1–17, 1881.)

For example, I have observed, I think, that an almost hallucinational image is transmitted better than an image really seen, despite the greater apparent distinctness in the latter case. But it is certain that an hallucinational mental image is more *monoideic* than an image merely seen. There are also differences with regard to the subject; some subjects are influenced most by visual images, others by mental sounds, others by motor images.[1] Transmission would seem to be appreciably helped when two persons that are able strongly to concentrate their thoughts act together, and when one thinks with the aid of visual images and the other with the aid of the sounds of the same images mentally produced.

But one fact specially worthy of attention, and one positive result of my experiments, is, that successes come by series—that is to say, there are fluctuations in the state of the subject which either help or hinder transmission. These series are perhaps more constant in somnambulism than in the waking state, but the principle of sympathic impressibility is ever the same. If there is to be transmission the brain ought not to be too torpid (aideia), nor too distracted (polyideia), nor too absorbed in its own thoughts (active monoideia); it ought, on the contrary, to be passive, *but capable of functioning with absorption* (passive nascent monoideia). The nearer the momentary state comes to this limit the better is the chance of successful transmission

But besides immediate transmission there is *latent* transmission, and *retarded* transmission. The subject's state may not permit direct communication (on account of the pressure of the thoughts that occupy him, or because of the torpor of the brain), but communication is effected all the same insensibly, and the idea taken in unawares makes its appearance unexpectedly in a subsequent experiment, or apart from experiments. Mr. Richet makes the highly important observation, that transmission is made more easily from the conscious to the unconscious than between two conscious states. Is it easier still between two unconscious states? We are unable at the moment to decide the question. It may be that the transmissor state must be the stronger, and usually (not always) the conscious states are the stronger; but perhaps also between two unconscious states, despite their habitual weakness, *mutual sympathic adjustment* is easier.

[1] Perhaps the reader will have some difficulty in understanding the terms, visual images, mental sounds, and motor images. Their meanings can be readily seen from an illustration: A sees a piece of piano music, knowing nothing at all about musical notation. The impression on his sensorium or brain is a purely *visual* image. B sees the same piece, but he can "read" music, and can imagine how it sounds when played on the piano; that imagination is *mental sound*. C also reads music, and in particular is a performer on the piano: as he reads he imagines himself playing the piece—*i. e.*, *putting in action* the muscles concerned in performing on the piano. The piece of music impresses *motor* images on C's sensorium.—*Translator*.

However that may be, the best conditions for such transmissions as we know of are these :

On the part of the operator, the state of definite (*déclaré*) active monoideism ;

On the part of the subject, the state of passive nascent monoideism.

The first is akin to polyideism, the second to aideia.

Consequently, the receiver-subject is not to reflect nor to divine, but to *undergo*, the action of the thought transmitted. It may be said almost without hesitation that this transmission—even when it takes place in a conscious state—is always effected by the unconscious strata of the mind as an intermediary. Hence it is that the subject can but seldom tell whence the transmitted thought comes to him, and he inclines to consider it as a spontaneous act of his own mind rather than as a suggestion from others. Two or even many thoughts may be transmitted simultaneously by two or more transmitters, but then they are still more subject to the influence of the individual medium[1] that receives them, and generally combine to produce a resultant, a *complexus* modified and accommodated to the associations personal to the subject.

It is probable that most of the transmissions that take place in ordinary life are always unconscious, though made manifest in their effects. They *partly* account for the undoubted phenomenon of the history of civilization, that certain ideas, certain tendencies and aspirations become dominant in certain epochs, and that reforms and revolutions often come to the front simultaneously in countries widely separated from one another, and between which there are hardly any mutual relations.

The first ages of Christianity, the period of the Crusades, that of the Renaissance, of the French Revolution, present striking examples in illustration of this remark. It is also worthy of note that the literary movement known as Romanticism had its evolution almost simultaneously everywhere—even Japan shared in it ; that the years 1830–31 and 1846–48 were much alike in different countries, and so-forth.

There are, beyond a doubt, epidemics of ideas. But with these, as with the foregoing classes of transmissions, *imitation* has much more to do than *direct communication*, and we must not let ourselves be carried away by fanciful conjectures. Suffice it to note *one element more* to be employed for the positive explication of a certain community of minds—an element, by the way, hardly noticeable in the general mechanism of history.

[1] *Milieu.* This word can generally be translated "atmosphere ;" it never means "medium" in the spiritist sense. In the present instance "individual medium" means the totality of psychic states, habits, *psychorganic* associations, etc., peculiar to the recipient subject.—*Translator.*

When one comes to recognize the possibility of thought-transference, one naturally seeks traces of it even in antiquity. Rare it may be, yet that phenomenon cannot have escaped the attention of authors who have scrupulously noted extraordinary manifestations of human faculty. I shall be content with a few examples only, seeing the slight scientific value of these observations of the remote past.

St. Augustin relates that while he was a Manichæan he consulted soothsayers. Licentius, whom he introduces in his books against the Academicians, reminds him of the lucidity of a certain soothsayer named Albicerius. One Flaccianus went in search of Albicerius, after having planned to win an inheritance, and entertained the soothsayer with the intent to make him reveal this *secret* design, that so he might judge of the man's skill. The soothsayer straightway told him the nature of the business in question; nay, more—and this heightened the wonderment of Flaccianus—specified to him, without any hesitation, *the name of the inheritance*—a name so barbarous and so difficult that Flaccianus himself could hardly remember it. Furthermore, Albicerius divined the thoughts of those who asked him questions.[1]

"The remarkable thing in this narrative," says Morin, "is that the lucidity of the soothsayer is not at all attributed to a revelation from God or his auxiliaries, for St. Augustin, become a Christian, is recounting the doings of a Manichæan."

Similar facts are found in the lives of saints and among *ecstatici* of all religions.

"Thus, the parish priest of Ars, who died quite recently (1876), and whom they already talk of canonizing, read (so they say) the thoughts of those who came to consult him, and by the infallible accuracy of his vision disconcerted the skeptics that approached him to test and baffle him. Joseph de Cupertius, canonized under the name of Saint Cupertinus,[2] famous for his many ascensions, had the gift of reading *the thoughts of penitents who did not dare to confess to him certain big sins.*"

"Of course," continues Morin, "we cannot accept, without verification, all these wonderful tales. It is a pity they were not subjected to strict and judicious critical tests. But in examining facts like these we may draw comparisons that will throw some light on a subject of much difficulty."

Thanks to one of those vulgar errors imposed upon mankind by

[1] Augustini "Contra Academicos," lib. i., cap. 6, Nos. 17, 18; Abbé Flottes, "Etudes sur Saint Augustin," p. 19 *et seq.*; A. S. Morin, "Les Lucides d'autrefois" (*Union Magnét.*, p. 640, 1867).

[2] The name Joseph de Cupertius has a suspicious look; and of a certainty no worthy was ever canonized "under the name of Saint Cupertinus." In the original the whole paragraph is printed in small type and stands between quotation marks, but no author is named.—*Translator.*

fate,[1] some almost certain proofs of thought-transference were collected in the seventeenth century. I speak of the belief in the existence of demons and their incarnation in the bodies of certain unfortunates. This forejudgment, like all others, is not altogether groundless; the facts upon which it originally stood were real facts. It was the interpretation of them alone that was erroneous, and that showed a deplorable ignorance. The eccentricity of a terrible disease, which to-day no longer frightens us, thanks particularly to the celebrated researches of Mr. Charcot, and which often makes its appearance amid the favoring conditions of great *hypnotic sensibility*,[2] led observers in the past to believe that a force outside of man, a demonic power, was required to explain these manifestations. And since the devil cannot take possession of a baptized body save by consent of its soul, these wretches were burnt to make easier for them the expiation of their offense.

In this way our neuropathic heritage has been diminished, but at the same time we have lost a great number of excellent hypnotic subjects.

But we must not suppose that our forefathers would proceed heedlessly to condemn man or woman charged with demonolatry. On the contrary, one was declared to be *possessed* only after a strict examination.

A regular code fixed the conditions of the inquiry. According to the Ritual, the priest that was called on to exorcize was required, after having prepared himself by fasting, prayer and other good works, on leaving the altar after the mass, to take his seat, and with covered head *inwardly to command* the demon to give him a sign, and the demon, constrained to obey, had to reveal his name. Thus, according to the Ritual, the priest had to exorcise only patients that possessed the marvelous faculty of *reading unspoken thoughts.*

[1] *Un préjugé fatal de l'humanité.*

[2] "It is rational to suppose," says Mr. Paul Richer, "that the phenomena of hypnotism which always depend on a disturbance of the regular functionment of the organism, require for their development a special predisposition which, *with one accord*, authors place in the hysteric diathesis" ("Etudes Cliniques sur l'Hystéro-Épilepsie," p. 361. Paris, 1881). True, there is almost unanimous agreement on this point, but the authors are mistaken, I believe. It is not hysteria that constitutes a favorable ground for hypnotism, but it is *hypnotic sensibility* that affords a favorable ground for hysteria. Maximum hypnotic sensibility may exist without hysteria. Hysteria is a malady that develops at a certain age, and that may either disappear or become much modified, while hypnotic sensibility is an innate property that is nearly *constant* and as a rule persists through life. It is a question of temperament, of physiological constitution. If hysterepilepsy appears in this favorable soil—favorable not only to it, but also to many another disease, cholera, for example—the hysterepilepsy is *easily* curable by "hypnotism." I cannot give here the proofs of what I assert, and the assertion may seem strange and rash. It is based on long experience, and one will perhaps not take the trouble to verify it. Meanwhile, the reader may regard these few lines as a simple note not related to the matter in hand.

Of course, that was not the interpretation the exorcists gave of the words of the Ritual. On the contrary, they believed transmission of thought to be impossible; and if nevertheless the patient answered the mental questions, being in an hysterepileptic paroxysm, or in the state of spontaneous somnambulism, that was proof that his case was one not of disease, but of possession. It was believed that the devil, who is a spirit and an evil spirit, could discern thoughts, but that a person that was merely ill could not.

Father Surin,[1] in recapitulating the proofs of possession in the case of the Ursuline Nuns of Loudun, presents as one of the most indisputable the fact that *they told the most secret thoughts.* Of the many examples he gives of this faculty, I will quote only these two:

"The day after my arrival (he says), there was present at the exorcism a man who expressed to me a desire to see whether the demon knows our thoughts. I bade him make an order in his heart; and after he had done so, I constrained the demon to do what the man had ordered him. After giving me a few refusals he went to take from the altar the card on which is the gospel of St. John, and this man declared that he had in his heart ordered the demon to show the last gospel that had been read at the mass.

"One of our Fathers wishing to find if it were true that the demons know our thoughts, gave an inward order to the demon on duty (*en faction*), and then gave another; in short, in the space of an instant he gave five or six orders, and recalling them one after another, tormented the demon, saying, '*obediat ad mentem.*' The demon repeated aloud all the orders the Father had given him. He began with the first, then he said: 'But Monsieur does not wish.' Being at the seventh, he said: 'We shall see whether we shall do this, on which he has at last settled.'"

Among the other witnesses that affirmed the existence of thought-communication on the part of the Nuns of Loudun, we must quote the King's brother, who signed a certificate in which he declares that for several reasons he dare not doubt the possession. Among his reasons was the fact that a nun obeyed an order given by him mentally, without uttering a word or making any sign. Here is the passage in question:

"We, Gaston, son of France, Duke of Orleans, certify . . . . . And having wished once more to have a perfect sign of the possession of these women,[2] we concerted in secret and in a low voice with Father Tranquille, Capuchin, to order the demon Sabulon, who then possessed the said Sister Claire, to go and *kiss the right hand of Father Elysée*, his exorcist; the said demon obeyed strictly according to our desire, the which made us believe for certain that what the religious men laboring in the exorcisms of the said women had said to us of their possession is true, there being no appearance that such movements and knowledge of things secret could be attributed to human

[1] Bertrand, "Du Magnétisme," p. 321. Paris, 1826.

[2] *Filles*—unmarried women of any age.—*Translator.*

power. Whereof wishing to render testimony to the public, we have granted this present attestation, which we have signed with our own name, and had countersigned by the Secretary of our Commands, House and Finances of France this 11th May, 1635.

(*Signed*) GASTON."[1]

Prince Gaston, then, has this title to our gratitude—his only one, doubtless—that he made one of the first experiments in mental suggestion.

The Jesuit Surin made a good many more. He was able to declare, upon his conscience, that possession was a fact, and to swear before God and the Church that "*more than two hundred times*" demons had discovered to him "very secret things, hidden in his thoughts or about his person."

This revelation it was that decided the conviction of those hapless nuns, when proofs were no longer to be had, the devils refusing to do miracles.

Evidently the phenomenon of transmission was not manifested at all times, and it took a good deal of assiduous work on the part of Father Surin to obtain so imposing a lot of proofs. The exorcist—read *magnetizer*—thus acquired a personal influence over these subjects, an influence that prevented that of other persons from being exercised. The *ecstaticas* sometimes divined thoughts, but Father Surin must know beforehand what the thoughts were; else the thing did not work.

The Duke and Duchess de la Trémouille wished to repeat the experiment of the Duke of Orleans, only they took care not to communicate in advance to the exorcist the thought they wished to have divined. Three long hours they waited, but the demon did not divine anything. The same experiment was tried by two counselors of the parliament: the demon could not succeed in discovering their thought. To account for this, *a pact of silence* was alleged, shutting the demon's mouth.[2]

But in addition to these set experiments, there was a number of others that succeeded. The exorcists, who had got into their heads a whole hierarchy of demons, and who had adopted a preconceived theory, accusing the handsome priest, Urban Grandier (who was loved platonically by the nuns and most of his female parishioners), of having given up to the devil his own soul, and those of the sisters, *involuntarily communicated their a priori notions to the ecstaticas*, who did all they could to confirm them. The following interrogatory may serve as an example of this kind of suggestion:

"Hardly had Jane de Belciel noticed the magistrates when she

[1] "Relation de ce qui s'est passé aux Exorcismes de Loudun,' etc. *See* L. Figuier, "Hist. du Merveilleux," vol. i., No. 205. Paris, 1873.

[2] Figuier, *op. cit.*, i., 218.

fell into violent convulsions. She acted in the most extravagant fashion, writhing on her bed, gesticulating, uttering plaintive cries. A Carmelite stood at the right of the possessed: Mignon (the Canon), who was on the left, began his exorcisms. Here is his first dialogue with the demon" (that is to say, with the patient's Unconscious):

"'*Propter quam causam ingressus es in corpus hujus virginis?*' (Wherefore did you enter the body of this virgin?)

"'*Causa animositatis*,' answered Jane de Belciel, still a victim of the convulsions. (Out of animosity.)

"'*Per quod pactum?*' (By what means?)

"'*Per flores.*' (By flowers.)

"'*Quales?*' (What flowers?)

"'*Rosas.*' (Roses.)

"'*Quis misit?*' (Who sent them?)

"'*Urbanus.*' (Urban.)

"'*Dic cognomen.*' (Tell his surname.)

"'*Grandier.*'

"'*Dic qualitatem.*' (Tell his station.)

"'*Sacerdos.*' (Priest.)

"'*Cujus ecclesiæ?*' (Of what church?)

"'*Sancti Petri.*' (St. Peter's.)

"'*Quæ persona attulit flores?*' (What person brought the flowers?)

"'*Diabolica.*' (A diabolic one.)

"It is evident that there were in this interrogatory suggestions, and they not mental only, and that on the other hand the examiner had neglected to clear up certain answers of the patient; so the proceedings did not seem entirely correct to the magistrates present at the exorcism.

"'It would have been well,' said the civil lieutenant, 'had the possessed been interrogated as to the cause of the animosity of which she has spoken.'

"'I am not allowed,' answered the priest, 'to put indiscreet questions.'

"'But it seems to me,' the lieutenant made bold to say, 'that that question would not have been more indiscreet than the others—than that, in particular, whereby you procured the name and surname of Urban Grandier to be given to you.'

"Thus, then, did the devil in the first interrogatory reveal his presence. But such was not always the exorcist's thought, or at least the *ecstatica* did not always divine just what he wanted her to say. From this resulted some amusing contradictions. Here is another interrogatory conducted by another exorcist, named Barré, in presence of the *bailli* and four physicians.

"The mass having been performed, Barré came forward to give the communion and thereafter to exorcize. Holding in both hands the blessed sacrament, he said to the possessed:

"'*Adora Deum tuum, Creatorem tuum.*' (Adore thy God, thy Creator.)

"She answered:

"'*Adoro te.*' (I adore thee.)

"The exorcist, a little taken aback by this answer, resumed his questioning.

"'*Quem adoras?*' (Whom do you adore?)

"'*Jesus Christus*,' she answered with a solecism.

"Whereupon one of the assessors of the provost, Daniel Drouin, could not help saying quite aloud:

"'There's a devil that is not grammatical.'

"The exorcist, a little disconcerted, repeated the question, taking care, however, to modify his phrase so as to bring the nominative case (which had just been employed amiss) into the answer.

"'*Quis est quem adoras?*'

"But the possessed, conscious that she had made a slip in grammar, chose to set matters right by employing the vocative case—which came in no less amiss.

"'*Jesu Christe*,' she answered.

"'There's bad Latin,' exclaimed several persons present, but the exorcist held that the answer was '*Adoro te, Jesu Christe*,' and the grammatical dispute was not carried any further."[1]

But if the devil was not quite correct in his Latin, still he was rather accommodating, for he recognized Jesus Christ as his master.

Someone, perhaps, will be surprised to find these nuns speaking Latin, but they had some little knowledge of it, being obliged to explain the creed and the paternoster to the novices; they heard Latin every day all around them; and in ecstatic states the memory is often highly developed. Sick patients and somnambules have been known to pronounce several phrases in languages of which they knew nothing in the normal state, but which they heard spoken in their childhood. Finally, the transmission of thoughts was sometimes added to other causes. When that failed and the possessed knew not what reply to make to a question put in Latin, she would say "*Deus non volo*," instead of "*Deus nonvult*."

When a question was asked in Greek or Hebrew, there was no answer. Sometimes, however, thought-communication helped in such cases.

Finally, there was still another phenomenon that led people to believe in the gift of strange tongues: the *ecstaticas* sometimes spoke a language entirely unknown.

It is known that now and then, particularly in spells of good humor, one will utter odd sorts of words, senseless combinations of syllables. This tendency is seen in the *argot* of students and children. Some ecstatic and convulsive states exhibit this caprice of our automatism in a peculiar way. The *ecstaticas* of early Christian times also spoke unknown tongues.

"I have already observed (says Carré de Montgéron) that it is in the height of their ecstasy that many convulsionaries pronounce those discourses in unknown or foreign languages. I must add that they do not themselves understand the purport of them save at the moment, while they are pronouncing them, and that they remember them no more, or at best only in a general way, the instant their discourse is over."[2]

"The same phenomenon was seen among the first Christians. St. Paul shows this plainly in sundry places: 'He that speaketh a

[1] Figuier, *op. cit.*, 108.

[2] Montgéron, "Idée de l'État des Convulsionnaires," p. 89.

tongue,' says he (1 Cor. xiv.), 'speaketh not to men but to God, for none understandeth.' Elsewhere he says in effect that these tongues are but signs to procure the conversion of unbelievers." (Bertrand, 325.)

But sometimes one cannot explain the answers of the possessed, except by thought-transference. Here are some instances of this sort, taken from Lamenardière's "Démonomanie de Loudun:"

"Mr. Launay de Barillé, who had lived in America, declared that, on a visit he made to Loudun, he had spoken to the nuns the language of certain savages in that country, and that they had answered him very aptly."

We are not told what words these were. If they were, as is probable, only such expressions as "Good-day," "How do you do?" the very tone of the phrase might betray the meaning. But here is a more detailed narrative:

"The Bishop of Nîmes having put questions in Greek and in German, got satisfactory answers to both. He ordered (in Greek) Sister Claire *to lift her veil* and to *kiss* the grille[1] at a spot he designated. She obeyed him, and did several other things that he desired of her. On this occasion it was said publicly of this prelate that he must needs be either an atheist or an idiot if he did not believe in possession.

"Some physicians, too, questioned them in Greek upon the terms of their science—terms very difficult and known only by the learned in their profession; the nuns explained them clearly.

"Some gentlemen of Normandy certified in writing that they had interrogated Sister Claire de Sazilly in Turkish, Spanish and Italian, and that her replies were quite apt."[2]

Carré de Montgéron[3] speaks of a young lady, Dancogné, who, though she never had any voice, used to sing canticles in an *unknown* tongue. (I have myself observed similar facts in the state of *somnambulic delirium*.) "But," says Montgéron, "what is more surprising is, that it often happens to her, in certain times of ecstasy, to understand the meaning of all that is said to her in whatever language it may be spoken, and to make reply in a perfectly apt way to all; a multitude of people have witnessed this."

Bertrand justly remarks that very few cases indeed are recorded in which the answer is given in the same language, and in those cases the foreign tongue was more or less known by the patient, whereas in the great majority of cases the patient understands the language (that is to say, the thought) but does not speak it.

Evidently it is easier to get at or divine the meaning of a phrase spoken with a certain intonation, than to fish out foreign words in the

[1] The grating that separates the outer reception room from the cloistered portion of a nunnery.—*Translator.*

[2] Pilet de Lamenardière, "La Démonomanie de Loudun," etc., p. 26. 2d ed., La Flèche, 1634.

[3] *Op. cit.*, p. 53.

mind of one that knows that foreign tongue, in order to reply to him in the same.

"As for somnambules (says Bertrand), magnetizers are not wont to exercise them in giving replies in unknown languages, and I can quote only one fact of that kind. It was reported to me by an estimable man, a physician of great learning, too early taken from science and his friends. He had a somnambule that presented to him the most marvelous phenomena, and who understood him when he spoke Greek, Latin, or English. One day he decided to *read* to her a few lines in English. 'Do you expect me to understand your gibberish?' she asked. 'But,' the doctor replied, 'I spoke to you a moment ago in the same tongue and you understood me.' 'Then it was your thought I understood,' answered the somnambule, 'and not your language.'"

"August 6, 1634 (writes Lamenardière) John Chiron, Prior of Maillerais, wishing to be confirmed in the belief he had in 'possession,' said in a low voice in the ear of Blaise de Fernairon (Canon) that he wished the nun to open the Missal that was by the grille, and to put her finger on an *introit* beginning with the words '*Salve, sancta parens.*' The exorcist bade her to obey according to the intention of the said Sieur Chiron. *She fell into strange convulsions*,[1] and uttered several blasphemies, and though she had never seen the said Sieur, she called him Prior of Maillerais, and, after several orders reiterated for an hour, she took the Missal, which lay on a shelf by the grille, and said, 'I wish to pray to God,' and turning her eyes in another direction, she put her finger on a large S, at the beginning of the *introit* of a Mass of the Virgin, the opening words of which are '*Salve, sancta parens*,' which the said Prior seeing, he said that was the sign he had asked for."[2]

"June 20, 1633, a priest of Saint-Jacques-de-Fouars, desiring to make proof of divination of thought, in a low voice asked the exorcist to make the possessed bring five leaves of a rosebush. The exorcist ordered Claire de Sazilly to obey. The nun went out and into the garden, whence she brought first a marigold and some other herbs, and presented them at the grille, with much crying, saying to the Sieur de Morans: 'Is that, Father, what you *ask? I am no devil, to know your intentions.*' Whereto he replied simply, '*Obedias!*' (obey!) She went back to the garden, and, after many repeated orders, presented at the grille a small sprig of rosebush on which were *six* leaves. The exorcist said to her, '*Obedias punctualiter sub pœna maledictionis!*' (obey precisely under pain of a curse!) She now broke off one leaf, and presented the sprig to him, saying, 'I see that you want only five, the other was not of the number.' The Prior was so content with what he saw, and so moved, that he went away with tears in his eyes."[3]

In the same work we find recorded many similar cases. For instance, Sister Claire kneels by mental order of her magnetizer exorcist; she divines the day when the Chevalier de Méré last confessed, and repeats words that were heard by the exorcist alone; and so on.

[1] See Mr. Gibert's experiment, p. 90, *supra*.

[2] Pilet de Lamenardière, "La Démonologie," etc., p. 26.

[3] *Id.*, p. 27.

The latter class of facts, namely, suggestion or penetration of thoughts, seemed impossible to Aubin (author of the "Histoire des Diables de Loudun"), who was overmuch afraid lest he should be forced to believe in Dæmonomania. He gives only one instance of suggestion, the one witnessed by Prince Gaston, May 10, 1635.

Another author, Dr. Calmeil, no less scrupulous, but more impartial, after having seen that artificial somnambulism produced some of the effects for which people wanted to hold the demons answerable, adds: "On a hundred occasions indeed, we may believe, the energumens (the possessed) read the thoughts of the religious men charged with the duty of fighting the demons."[1] "*Read the thoughts of the religious men*, who gained a powerful influence over them," remarks Figuier, "and not the thoughts of other persons."

This remark is applicable in the majority of cases. We may, however, recall some experiments in mental suggestion made by me upon Mrs. B. (*magnetized by Mr. Janet*), and who had not seen me while she was in the waking state (p. 85, *supra*).

We find the same phenomenon among the prophets of the Cévennes; so, too, among the Convulsionaries of Saint-Médard. "Add," says Dr. Bertrand, "that Madame Guyon, that mystic devotee, famous for the admiration that the virtuous Fénelon professed to have for her, tells in the history of her life, that often she used to read the thoughts of Father Lacombe, her confessor, as he read hers; 'I saw,' she says, 'that men might, in this life, learn the language of the angels; little by little I was reduced to speaking to him only in silence.'"

It is to be remarked that the conversations of these two pious souls probably were ever about the same questions, and that consequently the divination was not always difficult.

Let us now turn to the somnambules:

"Among the somnambules that I have magnetized (says Bertrand), I never found one that presented communication of thought in any high degree. Nevertheless, I can cite two facts of which I am personally cognizant. The first is found recorded in my 'Traité du Somnambulisme' (p. 247). The case was that of my first somnambule, on whom I was performing the processes by which I had been accustomed to awaken her, while, at the same time, I willed strongly that she should not awake. Instantly she had violent convulsive movements. 'What is the matter?' I asked her. 'How is this?' she replied; 'you tell me to awake, and you want me not to awake.'"

This experiment is very conclusive, but it is rarely successful, for the ideorganic association formed between certain gestures and sleep, produces sleep by force of habit, the weak, purely mental opposing influence notwithstanding.

"The other instance coming under my personal observation is found at page 279 of the same work. A poor woman, uneducated, not

[1] Calmeil, "De la Folie," vol. ii.

able to read, could, I was told, understand in somnambulism the meaning of words the signification of which was unknown to her in the waking state; and, in fact, she explained to me most accurately and most ingeniously what we were to understand by the word *encephalon*, which I proposed to her: a phenomenon which, if you do not wish to regard it as chance—a supposition as hard to admit, perhaps, as the faculty itself, that the phenomenon supposes—can only be explained by recognizing that this woman read in my very thoughts the signification of the word about which I had questioned her."

This fact, too, is worthy of attention, and for this reason: If we compare the diagnostic pronouncements of somnambules recorded in the writings of magnetizers who themselves did not possess compepetent knowledge of anatomy, with the pronouncements of somnambules directed by a physician (for example, the 35 observations of Dr. E. Louis de Séré),[1] we find a great difference as regards precision. The same is to be said of psychological and other questions.

Unless we hold that none of the physicians that made these experiments could refrain from verbal suggestions, even while his precise object was to get at the truth, we must admit, here and there, transmissions of thought like those we have quoted from Bertrand.

The first person to call the attention of observers to the phenomenon of mental suggestion in artificial somnambulism, was the Marquis de Puységur. In his writings we find a great number of facts. Here is how he relates his first experience, in a letter of March 8, 1784, addressed to a member of the Harmony Society. In the first place, he apologizes for the enthusiasm awakened in him by his first attempts at magnetic treatment, begun "in play" (*en plaisantant*) and which had surprising results. Then he continues thus:

"These trifling successes led me to try whether I might be of service to a peasant, a man of 23 years, who for four days had been confined to his bed by an attack of pneumonia. I went therefore to see him: it was last Tuesday, the 4th of this month, at 8 o'clock in the evening. The fever was growing less. After having him taken out of bed I magnetized him. What was my surprise to see him, after half a quarter of an hour, *fall asleep* quietly in my arms, without convulsions, without any pain. I pushed the crisis [*i. e.*, he kept on magnetizing], and that produced vertigo. The man talked, speaking in a loud voice about his affairs [somnambulic ravings]. Judging that these thoughts might affect him injuriously, I sought to inspire him with more cheering thoughts. [The somnambulism therefore was not very active, and was akin to aideia and to a suggestionable state intermediate between aideia and polyideia.] To do this needed no great effort; then I saw him satisfied, imagining himself to be drawing for a prize, dancing at a festival, etc.

"These thoughts I encouraged in him, and so forced him to take a good deal of exercise in his chair, as though dancing to an air which, by singing it (*mentally*), I made him repeat aloud. By this means, from that day on, I occasioned in the patient an abundant perspiration.

[1] "Application du Somnambulisme Magnétique au Diagnostic," etc. Paris, 1855.

"After an hour of crisis, I quieted him [that is to say, awakened him], and left the chamber. A drink was given him. Having procured for him some bread and bouillon, I made him eat that very evening a soup—a thing he had not been able to do for five days. He slept soundly the whole night [amelioration of the natural sleep is an almost constant phenomenon in magnetism], and the following morning *had no recollection of my visit of the evening before;* he told me of his bettered state of health."

That experience was the starting-point of modern somnambulic magnetism. Some time after, Puységur, always enthusiastic about his successes, wrote as follows to his brother concerning Vielet:

"When he is in the magnetic state, he is no longer a simple hind scarcely able to phrase an answer, but a being I know not how to describe. *I have no need to speak to him; I think fornent him, and he understands me, answers me.* When anyone enters his chamber, he sees him *if I will it;* talks to him, tells him the things *I will that he tell him, not always as I dictate them to him,* but as truth requires. When he wishes to say more than I deem it prudent that people should hear, *then I stay his thoughts, his phrases, in the middle of a word,* and change his thought completely."[1]

He did not find, it seems, many somnambules of this stamp, for he has less to say about them in his two later writings: "Du Magnétisme Animal considéré dans ses rapports avec diverses Branches de la Physique générale," Paris, 1807; and "Recherches, Expériences, et Observations Physiologiques sur l'Homme," Paris, 1811. But he laid the more stress upon the appreciation of diseases, and he still believed that his will was the one sole agent—plainly an exaggeration.

The fact is, one always feels the effect of a first experiment; and this time a school was formed under the influence of this first impression of the master.

It is so in our day, and I hardly find more of prudence or of circumspection in the writings of medical men who, after having sophisticated an hysteric, believe themselves competent to lay down physiological "laws," and to settle in accordance with their individual convictions the most delicate and most complicated questions.

As for the old-time magnetizers, who spent their lives in studying these problems, sometimes without sufficient preparation, but at the same time without presumption, we do not read them nowadays; we just append to their names the epithet "charlatans." Some have adopted a more profitable method: they glean here and there an observation made by some old-time magnetizer, and having sophisticated it, and, above all, put their own brand upon it, take to themselves the credit of discovery. But let us proceed.

[1] Puységur, "Mémoires pour servir à l'établissement du Magnétisme," pp. 22, 29, *et seq.*

Some time after Puységur, a distinguished physician of Lyons, President of the Medical Society of that city, was led to investigate the more striking phenomena of magnetism. He was skeptical, and an opponent of mesmerism, but it so chanced that he was forced to recognize a series of facts far more extraordinary than anything announced by Mesmer. His researches on catalepsy, on the action of the magnet, of electricity and of metals, on the phenomenon known as "transposition of the senses," etc.; finally, on the subject that engages our attention here, mark an epoch in magnetism. They are to-day absolutely unknown; but as already *just a century* has elapsed since he observed certain facts, I have no doubt that some fine morning they will tell you that a hypnotizer in Lyons or in Paris has *discovered* them anew, and that, thanks to his ingenuity, his authority, and the general ignorance of history, a new "hypnotic" school has sprung up.

In the meanwhile let us note the facts that concern our subject. This is how Petetin[1] was led to employ magnetism for the first time:

"The patient was sinking day by day. She had hardly two hours' sleep in a night; she could take no nourishment except chicken broth, milk, and pounded ice. Petetin, her physician, possessed by the idea that the excitation of brain and nerves was caused by superabundant electricity, bethought him of making very strong aspirations fornent the patient's nostrils, to abstract this excess of electricity; but that method had no effect. Then, *laying one hand on the forehead and the other on the epigastrium*, he made another aspiration. Mrs. X. opened her eyes, but they were dull and fixed; at a second aspiration they resumed their brightness; a few minutes later, the fit, which used to last two hours, was over. At his subsequent visits the doctor substituted expiration for aspiration, and in eight days all the symptoms of this extraordinary malady had disappeared through this simple means, 'the effects of which,' says he, 'are as evident as the cause is hidden.'

"He adds that as the cure progressed, the faculties of the cataleptic patient acquired a new power. 'Not only did she foresee what was about to happen to her, but if one *conceived a thought without manifesting it by speech*, she was cognizant of it at once, and did whatever one had the intention to bid her do, *as if the decision had come of itself;* sometimes, however, she would ask that the mental order might be suspended or revoked, when the act ordered was beyond her strength, or if she was fatigued.'"[2]

Petetin made upon another cataleptic, Mrs. de Saint-Paul, a great number of experiments, and he invited, to be witnesses of these,

[1] Dr. Petetin, "Mémoire sur la Découverte des Phénomènes que présentent la Catalepsie et le Somnambulisme." Lyons, 1787. "Électricité Animale prouvée par la Découverte des Phénomènes Physiques et Moraux de la Catalepsie Hystérique." Paris, 1808.

[2] Foissac, "Rapports et Discussions sur le Magnétisme Animal," p. 369. Paris, 1853. Figuier, "Hist. du Merveilleux," vol. iii., p. 292.

several of his professional associates and other persons, as Messrs. Eynard, Colladon, of Geneva; Domenjon, Dolomieu, brother of the naturalist, and Jacquier, administrator of the Lyons hospitals. Eynard, the most incredulous of them all, came one day to the lady's house and found her in one of her fits, alone with a nurse. He had with him several drawings that he had made by electricity.[1] He held near the epigastrium of the patient the portrait of Louis XIV., and asked whether she recognized it. She gave an affirmative movement of the head. "Is it Francis I.?" Negative sign. "Louis XV.?" Same response. After several other names he pronounced that of Louis XIV.; she answered "Yes." Mr. Eynard having been assured that cataleptics are able to read the thoughts of persons in rapport with them, he asked her once more, in order to verify the fact, whether she knew the author of the drawing. Affirmative sign. He tried to mislead her by naming sundry persons, but she did not answer "Yes" till he had named himself. Say what he would about his being unable to draw, the patient only shrugged her shoulders; the more he denied, the more strongly she showed her impatience by characteristic gestures. Asked at last by what means he had produced the portrait, she pointed toward an electrical machine that was near her bed and which Petetin employed in treating her complaint.[2]

Soon people at Lyons talked of nothing else but the wonders of somnambulism, and no doubt Petetin's researches would in the end have won the attention of men of science, had not the Revolution broken out. "Nothing short of the cannon of the Revolution," says Figuier, "could have silenced in that town the discussions on magnetism. But at the time all this hubbub subsided, in Lyons as elsewhere, not because magnetism was forgotten, but because its adherents were scattered."

Petetin was forgotten, and died in 1808, without so much as printing his important treatise on "Animal Electricity," which appeared some months later. The work is now very hard to find.

The priest Faria,[3] a bold and truly original experimenter, held the attention of the public for a while about 1815. He is the father of the *Suggestionists* of to-day. He acted only by verbal suggestion and did not believe in will-transmission: thus he was in absolute opposition to the *Voluntists* of the Puységur school. As his one purpose was to produce effects in public, it is not surprising that he should have

[1] Our author prints this paragraph in brevier, but without quotation marks, so indicating that the statements it contains are given on the authority of the writers named in the next foot-note.—*Translator.*

[2] *See* Petetin, "Electr. Anim.," p. 127; Foissac, "Rapports, etc.," p. 310; Figuier, "Hist. du Merv.," vol. iii., p. 292.

[3] "De la Cause du Sommeil Lucide," etc. Paris, 1819.

failed to obtain a phenomenon that requires long and patient research in seclusion.

A third school, one more directly connected with Mesmer, was that of the *Fluidists*, represented by the learned librarian of the Paris Jardin des Plantes, a most conscientious worker, cautious and reserved, whose principal work, the fruit of *twenty-five years'* observation (I do not mention this detail to frighten the hypnotizers of to-day), appeared in 1813.[1]

Deleuze, as we know already, was familiar with the phenomena of transmission; he even glimpsed the benefit that might accrue to science from bringing into the domain of positive knowledge a great number of facts previously incomprehensible, and of a kind to lend support to vulgar errors (*préjugés*). But he does not concern himself much with these phenomena, for two reasons: First, he wished, especially in this first edition, to avoid everything that could offend the incredulity of the academic bodies; and then he regarded as unfitting all experiments made for curiosity' sake, *i. e.*, whatever has not for its principal end the cure of diseases. But so strongly did he believe in the community of thoughts between the magnetizer and his subject, that he says with a charming simplicity: "When one wishes to ask anything of the somnambule, he must express his wish in words. Good somnambules understand what you wish without your speaking. But why employ that means without necessity? It is an experiment, and we ought to have it made a law to deny ourselves all experiments."[2]

The reader will perhaps be surprised to see that in Deleuze's time this prohibition of experimentation was scrupulously respected by very many observers. Volumes were published upon the therapeutic application of magnetism, but the scientific experimental part made no progress. There were cures, that is all. It was only by accident, therefore, that mental suggestion was observed.

But certain magnetizers studied the question a little, and have left some interesting observations. I will quote all of these that have a right to our confidence, trying, as far as possible, to separate thought-transference from will-transference, which will be considered later.

Transmission of ideas and words, or of thoughts in general, presents itself in several forms:

1. *Direct Experiments.*—These are least numerous. To this class belong the experiments of Drs. Teste, Puel, Comet, Barrier, Perronet, and of Messrs. Lafontaine, Maricourt and Souchère. But it is, above all, the quite recent experiments of Professor Barrett, of the English Society for Psychological Research, that have revealed this phenomenon to us.

[1] Deleuze, "Histoire Critique du Magnétisme Animal." Paris, 1813.

[2] Deleuze, "Instruction Pratique sur le Magnétisme Animal," p. 135. Paris, 1825.

2. *Experiments in Apparent Vision*, which have been much more numerous, and in which thought-transference and transmission of recollections have been confounded with actual vision of near or distant objects. Under this head we will cite the observations of Dr. Charpignon, of Messrs. Tissot, Jolly, Baragnon, Lafontaine, Robert-Houdin, and General Noizet.

3. Finally, we shall have occasion to mention the fact that thought-transference is by accident associated with other classes of facts, especially in pseud-hypnotism.

Let us begin with the experiments of the English Committee, which are quite recent and which were the best controlled. The reports upon these researches already fill a volume, and I can reproduce only a few instances. I will, however, give in full the report of the experiments of December 6, 1884. They were made in presence of Mr. Guthrie and Professor Herdman.

Mrs. Relph, the subject, is seated, and the objects chosen for the experiments are concealed by a screen behind her back. The experiments take place without contact.

OBJECT THOUGHT OF.	OBJECT DIVINED.
1. Piece of red paper cut in the form of a small egg-cup with white egg in it.	Something red; longer than it is broad.
2. Blue paper in shape of a pitcher.	'Tis blue. 'Tis wider at top than in the middle, then wider again. 'Tis like a pitcher (draws figure of a pitcher).
3. Red paper cut in form of a vase.	'Tis red. I can see only the color.
4. A new rasp.	Something shining—silver or steel —long and thin.
5. A wooden disc on a dark ground.	I cannot make that out.
6. A red disc.	'Tis red; 'tis round and red.
7. Same object as in No. 5.	Is it something red all around?—reddish yellow — something light.
8. Silvered paper cut in shape of a teapot.	'Tis of bright silver, like a boiler —'tis a teapot.
9. A yellow oblong rectangular figure.	It is longer than wide.
10. A sovereign.	Is it bright yellow?—gold?—is it round?
11. Three of hearts.	Is it a card with red spots? A tray or something like that.
12. Five of clubs.	Another card, with five black spots?
13. Eight of diamonds.	A card with a good many spots? Red—a ten.
14. A card with two red crosses.	Something yellow and bright. I don't see well. Is it a card with red spots? I do not see.
15. No object. We think of a white cross on a black ground.	I see something white and black —I see two lines.

I commend this series to the attention of Mr. Preyer, and invite him to do the same thing by drawing lots.[1]

Let us now see what the magnetizers say:

"At Tours (says Mr. Lafontaine) I had a somnambule that was gifted with great lucidity. Mr. Renard, steward (*proviseur*) of the college, a man strongly skeptical, came each day bringing objects carefully wrapped up, and which he kept in his pockets. No sooner was he in rapport with Clarissa, the somnambule, than she named to him the object he had so carefully concealed. To prove to him that it was really *thought-transmission* and not *sight*, I had a mental order executed, that is, without my uttering a word or making any sign; but concentrating my thought upon any act the performance of which I wished, the somnambule rose from the chair and did what I willed."[2]

2. "Dr. Thomas presented to Clarissa his small lancet case, asking her what was inside. The somnambule answered that it contained only three instruments, and told him where he had left the fourth."[3]

3. "Sometimes Mr. Renard would fasten the doors and the shutters of his study, stopping the keyholes so that no one might see him; then he would light a candle and write a few words, and wrap several papers around what he had written. He would come with an air of triumph, hoping, after all the precautions he had taken, that the somnambule would not be able to see what he had written. But the instant he had put the paper in the girl's hand, *sometimes even before he had taken it out of his pocket*, Clarissa would tell him what he had written."[4]

4. "Mr. de la Souchère, educated at the Polytechnic School, an able chemist of Marseilles, had as a domestic servant a country woman in whom somnambulism and several of its noteworthy phenomena were produced with great ease. 'In magnetic somnambulism,' says he, 'Lazarine entered into most complete communication of thought with me, and *so insensible was she* that I used to drive needles into her flesh, into the roots of the nails, yet she would not suffer the slightest pain, nor would there be a drop of blood. [This phenomenon is very common; there is produced often in somnambulism a notable contraction of the small vessels.] In presence of the engineer, Gabriel and some friends I have made the following experiments: I would make her drink pure water, and she would tell me it had the taste of whatever liquid I was thinking of—lemonade, syrup, wine, etc. It was proposed that I should make her drink sand. She was unable to divine [the order]. Then I put sand in my mouth, and straightaway she began to spit, saying that *I was giving* her sand. [Transference of sensation.] I was then behind her and it was impossible for her to see me. [A similar experiment, but still more striking, is quoted by the Count de Maricourt: the subject, having drank *in the*

[1] Mr. Preyer, professor of physiology at Jena, has criticised the researches of Mr. Ch. Richet, declaring that he obtained by simple chance the same results. ("*Die Erklärung des Gedankenlesens nebst Beschreibung eines neuen Verfahrens zum Nachweise unwillkürlicher Bewegungen.*" Leipsic, 1886)

[2] Ch. Lafontaine, "L'Art de Magnétiser," p. 98, 5th ed. Paris, 1886.

[3] Ch. Lafontaine, "Mémoires d'un Magnétiseur," vol. i., p. 154. Paris, 1866.

[4] *Ib.*

waking state a glass of water, under mental suggestion of a glass of *kirschwasser*, manifested all the signs of intoxication *for several days*. I would remark that when such phenomena are produced in the waking state it is harder to do them away than when they are produced in somnambulism. It is phenomena of this sort that lead magnetizers to believe that, by magnetizing a glass of water or any other object, they can impregnate their "fluid" with different physical and chemical properties. The magnetization is of no effect in such case, for it is the thought that acts, and not upon the object, but upon the brain of the subject.] Some one sends me a book (Robinson Crusoe.) I open it and examine an engraving representing Robinson in a canoe. Lazarine, being asked what I was doing, answered: 'You have a book; you are not reading; you are looking at a picture; there is a boat and a man in it.' I bade her describe to me the furniture of a chamber that she did not know, and she described the articles of furniture *precisely as I represented them to myself*. I have not been able to see in my domestic transposition of the senses. Different objects would be applied over the epigastrium: *if I knew what they were, she would describe them;* if I did *not* know what they were, she was unable to name them. It is possible that, in certain cases, what has been accounted transposition of the senses is only transmission of thought."[1]

5. Dr. Teste[2] has again and again found that the somnambule can follow the magnetizer's thoughts. "Miss Diana," says he, "had a conversation with me in which I spoke only mentally." He cites, furthermore, an extraordinary experiment wherein mental suggestion appeared as an *hallucination*.

"One day," he writes, "I imagined a wooden railing round about me, but spoke not a word. I put in the somnambulic state Miss H., a very nervous young person, and asked her to fetch me my books. Coming to where I imagined the railing to be, Miss H. halted, saying they had set up a railing there. 'What a singular idea,' she said, 'to have put a railing in this place!' If you take her by the hand to make her go beyond, her feet are riveted to the floor, the upper portion of her body alone is projected forward, and she says you make her stomach press against the obstacle."

And here is a highly interesting fact recorded by Dr. Bertrand in one of his lectures on magnetism, reproduced by Noizet:

6. "A magnetizer deeply imbued with mystic ideas had a somnambule who, in his sleep, saw nothing but angels and sprites of all kinds. These visions served more and more to strengthen the magnetizer's religious belief. As he was always quoting his somnambule's dreams in support of his system, another magnetizer undertook to undeceive him by showing to him that no somnambule has such visions as he told of, except so far as they existed first in the magnetizer's brain. To demonstrate this assertion, he proposed to make the same somnambule see *all the angels of heaven at table together, and eating turkey*. So he endormed the somnambule, and after a while asked him if he did not see something extraordinary; the somnambule replied that

[1] Dr. Despine, "Etude Scientifique sur le Somnambulisme," p. 221. Paris, 1880.

[2] Teste, "Manuel Pratique du Magnétiseur," 4th ed., 1854; and "Le Magn. Anim. Expliqué," p. 243, 1845.

he saw *a great company of angels.* 'And what are they doing?' '*They are around a table and are eating.*' But he could not tell what dishes they had before them."[1]

In general, if the somnambule thinks he *sees* something out of the ordinary course of things, the first question is, whether that is not due to simple involuntary suggestion on our part.

7. "A student of medicine asks one of my somnambules what patients the jury will give him for examination as his test for the doctorate. She described very accurately three patients in the Hôtel Dieu who had more particularly attracted the attention of the student, and whom he would have *wished* to be made the subjects of his examination. She even added—a characteristic detail—with regard to one of the patients: 'Oh, what a bright eye that woman has—and fixed! It makes me afraid, that eye!' 'Does she see with that bright eye?' asked the student. 'Hold! I do not know—it is hard. It is not natural. What is it made of? Something—something that breaks—and shines. Oh, she is taking it out—putting it in water,' and so on. The patient had a glass eye; this fact, of which I was quite ignorant (for I did not know the patients in question), but which was known to the student that was questioning the somnambule, was *described* accurately by her. Whence did she get the image? From the questioner's psychism, which, through mine as an intermediary, was reflected in her.

"It is right to add that the somnambule's predictions were not fulfilled; that on the day of his test the student had to examine other patients, and that those described by the somnambule were not even mentioned."[2]

"As a rule," says Dr. Charpignon, "second-sight is confounded with the phenomenon of thought-transmission. Thus, most of the experiments that are cited consist in asking the somnambule to go to your home or to a place known to you. You are in rapport with him and he usually describes to you places or objects with the utmost precision. Now, in all this there is, as a rule, no real vision: the somnambule sees in your thoughts the images you trace therein. The more attentively you follow him and direct his descriptions (namely, by helping him with verbal suggestions), the more perfect they will be."[3]

But this is of rather rare occurrence. I have observed only one case of this kind. That was some time ago, and as I did not believe in mental transmission, I regarded the fact as the result of circumstances that it was impossible to verify. According to the person that consulted the somnambule, the latter had described exactly to him his house and garden. But Charpignon is quite right in saying that if there be such a thing as vision at a distance, it has usually been apparent only, leading astray magnetizers that were not exacting.

[1] Noizet, "Mémoire," p. 128.

[2] Perronet, "Du Magn. Anim.," p. 34, 1884.

[3] Dr. Charpignon, "Physiologie, Médecine, et Metaphysique du Magnétisme," p. 90.

They wrote a few words, for instance, on a bit of paper, then folded this carefully; the somnambule clapped it on his own person anywhere, and "read" the contents. It was Dr. Teste, I believe, who, believing he had a case of second sight, broke down completely in his experiments before the Academic Commission of 1840, when a bit of writing shut up in a box, and the contents of which he did not know, was to be "read" by the somnambule. It need not be added that certain *bona fide* magnetizers, among them Mr. Hublier, have been simply tricked by their somnambules.[1]

Mr. Henry Joly,[2] who does not believe in clairvoyance, nor in thought-transference, relates the following:

8. "We have from an honorable magistrate, one of the most sympathetic auditors of our courts, the minutes of an inquiry or *expertise* made by him in the case of a somnambule, whose practices had been brought under the notice of the officers of the law. This magistrate was of the opinion that the somnambule was honest and that she was really endormed. Monday, July 4, 1859, he said, I repaired at 8.40 A. M. to the house of the B's., husband and wife, living in C. S. S., St. G. Street. I asked Mr. B. to put his wife in the state of magnetic sleep. The woman has been *blind* for 2 years, does not distinguish objects, and has but a dim perception of light through the left eye. Mr. B. had told me that I might interrogate his wife; I put into her hands a white handkerchief, and the following dialogue took place: 'Can you tell me what mark is on this handkerchief?' 'Very easily; but who gave you this handkerchief?' 'Answer my question. This handkerchief is mine; I bought it.' '*The mark that I have under my fingers* is pretty hard to read. But I see an M.; I cannot read the letter that is before it' (the mark on the handkerchief is J. M., on red cotton, in Gothic letters). . . . . .

"'What is the age of the person to whom this lock of hair belongs?' 'It is a young person.' 'Can you conduct me to that person?' 'No; for the person is no more.' 'You have divined aright. Can you read the letters written *on the inside of this medallion?*' 'It is pretty hard. I will try. . . . No; I cannot read.'

. . . . . .

"'Could you tell me whether I have on my body a fresh wound, and where?' 'Yes; you have one on the leg, or rather not a wound, for it is closed.' 'On which leg?' 'It is on the left.' (That was correct, but she was in error as to the precise place.) 'I hand you this lock of hair wrapped in paper. Examine it.' 'It is not blond like that you showed me a while ago; it is *very dark brown.* What do you mean to do with it? Take it to my neighbor, R.; *he makes hair-work mementoes in very fine style.*' 'Tell me whose hair it is.' (The somnambule is much fatigued; she hesitates for a good while without replying.) 'Does it belong to a man or to a woman?' 'To a woman.' 'You are mistaken.' 'Yes, I was mistaken. I thought you intended this hair to be worn by a woman; that is what I meant to say.' 'Tell me whether I have much love for the person to whom this hair

[1] Burdin and Dubois, "Histoire Académique du Magnétisme Animal," p. 584, *et seq.* Paris, 1841.

[2] H. Joly, "L'Imagination, Etude Psychologique," p. 60. Paris, 1877.

belongs.' 'So much that one cannot have more.' 'Do you know what that person is to me?' With a little impatience: 'I have told how you loved the person. It is with family affection, that is plain; it is the bond of blood; I cannot say anything else.' The hair was very dark brown; it was a lock cut from the head of my only son by his mother, who intends to have a bracelet made of it for herself."

The author from whom this observation is taken does not believe in clairvoyance, and plainly there is in this instance no *clairvoyance* proper; but it were difficult, I think, to explain the facts unless there were some traces of thought-transference in spite of the verbal suggestions, which are not wanting.

Another skeptic, Mr. Tissot,[1] gives his own experience:

9. "*Seance of Sept.* 4.—Sixty pulsations a minute, before the sleep as after; but at the moment of sleep and before the feigned or real convulsion (there was no convulsive movement in the two latest seances) sudden weakening of pulse, without slowing; after the convulsive movement the pulse regains its intensity. The somnambule, who, according to all appearances, knew not the localities I made her traverse and visit, though she was of Franche Comté and Haute-Saône, betakes herself to the village where I was born, the name of which I withhold from her, and which she names of her own accord. But in passing by way of Pontarlier she gives the name of that town; tells the direction in which lies Les Fourgs—the village in question; describes the road leading thither from the Department highway; assigns the position of the church outside the village, and gives almost the number of my father's house; adds remarkably correct particulars about my mother, the sequels of her lying-in, her ailment, the treatment, her death. But she is mistaken as to my age at the time of the death, and on the make-up of the family. She hits it exactly with regard to sundry details of the life of my father and my mother, and is mistaken as to some others. She describes with great precision the features of the country as one observes them in following the path leading from the village to the hamlet of La Beuffarde; makes two mistakes with regard to the house I used to live in; then describes its parts precisely; is mistaken as to the cause of the ruin of a neighboring house. She gives correct details about my early years; follows me elsewhither; is only half-way mistaken with respect to my situation at Pontarlier from 1815 to 1819; is more exact as to my life and occupation at Besançon; but her intuition of the remainder of my life is a little more obscure, though a pretty large number of the particulars are true."

In this narrative we have a somnambulic dream, fed by verbal suggestions, but also by communication of recollections, especially recollections of early childhood, which are wont to be vivid.

Mr. Tissot's somnambule, as also Mr. Joly's, was deaf to impressions not proceeding from the person with whom she was in rapport.

Mr. Tissot presents his manner of making notes as a model. But

[1] J. Tissot, "L'Imagination, ses Bienfaits et ses Égarements," p. 119. Paris, 1860.

it is far from being satisfactory. He has noted all the errors of the somnambule, but that is not enough. The entire dialogue must be noted. Hence I prefer General Noizet's narrative.

General Noizet, author of several philosophical works, and whose volume on somnambulism was praised at the Academy of Sciences by Flourens, recounts the following fact:

10. "I reached my friend's place before the magnetizer and his somnambule, and the master of the house told us that among the extraordinary powers she was credited with was, that she could tell what a person with whom she was put in rapport had been doing throughout the day. Now, on that very day it chanced that I had done something quite out of the common—I had gone to the Hôtel des Invalides with the Duke de Montpensier, to show him the gallery of relief-plans of the fortifications. I proposed to test on myself the somnambule's power, and this proposition was accepted by my two friends. The somnambule having arrived and having been endormed, I forthwith put myself in rapport with her, and asked if she was able to *see* what I had been doing that day. After some details of little consequence, and obtained with difficulty, as to how I had passed the morning, I asked whither I had gone for breakfast. She answered, without much hesitation, 'To the Tuileries.' That might mean a simple stroll thither, so I persisted and asked at what point I had entered. 'By the wicket on the quay hard by the Pont-Royal.' 'And then?' 'You went up into the château.' 'By which steps, the middle ones?' 'No; by those at the corner, near the wicket.' Here she lost herself among the different sets of steps—and well she might, for there are many of them. Finally she set me down in a large hall where some officers were. It was a reception hall on the ground floor. 'You waited,' said she to me. 'And then?' 'A tall young man came and spoke to you.' 'Who was that young man?' 'I do not know.' 'Try hard to find out.' 'Oh, it is the King's son.' 'Which?' 'I do not know.' (I tell her it was the Duke de Montpensier.) 'Afterward?' 'You entered a coach.' 'Alone?' 'No; with the prince.' 'Where was I placed?' 'In the rear, to the left of him.' 'Were we two alone in the coach?' 'No; there was, further, in front, a stout gentleman?' 'Who was that gentleman?' 'I do not know.' 'Try.' (After reflecting) ''Twas the King.' 'How,' said I, 'I on the rear seat and the King on the front? You see that is not reasonable.' 'I can't say; I do not know that gentleman.' 'Well, it was the Prince's aide-de-camp.' 'I do not know him.' 'Where did we go?' 'Along the riverside.' 'And then?' 'You entered a large château.' 'What château?' 'I do not know; there are trees before you come to it.' 'Take a good look at it, you must know it.' 'No; I don't know.' (I drop this question and tell her to continue.) 'You were in a large hall.' (Here she gives me an *imaginative* description of the hall, where she see stars glittering on a white ground.) At last she said to me: 'There were long tables.' 'And what was on the tables?' 'It was not high nor was it entirely flat.' (I could not bring her to tell me that it was relief-plans—things that she, no doubt, had never seen.) 'What did we do then, at those tables?' 'You got on a bench, and with a long rod pointed out something?' (This remarkable specification was perfectly exact.) At last she had us in the coach again and away. I then said to her: 'But just look back; you must recognize the place

we are leaving.' 'Ah!' she said, as though astonished and confused, ''tis the Hôtel des Invalides.' She said, furthermore, that the Prince quitted me at the door, which was the fact.

"Though familiar with the phenomena of somnambulism, this scene nevertheless impressed me much, and I could not reasonably attribute to any cause save the faculty of reading my thoughts or of deciphering impressions still existing in my brain, the kind of divination exhibited by the somnambule. That is the only explanation I can give even to-day."

This observation is curious, indeed, in that it proves:

a. That till the moment when the General had fixed his attention on some detail of his recollections, the somnambule divined nothing.

b. That sometimes she spoke according to verbal suggestions made by the General, and that then either she wandered abroad in conjecture, or else complemented these verbal suggestions with details mentally transmitted.

c. That she "saw" best the details that had left the most vivid traces on the mind of the General.

d. That the traces partially transmitted were completed little by little, till they formed a more distinct image (the Invalides).

e. That sometimes reflective conjecture failed completely, and then the somnambule guided herself by images passing spontaneously through her mind (the King).

11. "Professor Barrett, of Edinburgh, tells of a young Irishwoman who, though she never had been away from her native village, was able to describe Regent Street, London, which street he was thinking of when he magnetized her. From this fact and from other facts like it, Professor Barrett concludes that any idea upon which the operator concentrates his thoughts produces its like in the mind of the magnetized subject."[1]

12. Mr. Ch. Richet has recently collected many observations of this kind (not yet published). The subject, when questioned by the operator, describes a chamber, a house, etc., according to the magnetizer's recollections. These observations, made with exactness, possess a special interest, for they may help us to determine the rôle of *unconscious recollections* in the act of transmission. We may in this way decide whether, and in what proportion, the knowledge one possesses, but which at the moment is not present in the mind, can be transmitted to the subject. All that is needed for attaining this object is carefully to note and describe in detail the operator's mental state.

13. Mr. William Gregory, ex-Professor of Chemistry in the Uni-

[1] I quote the passage from P. Despine (*op. cit.*),only correcting the name of the operator from *Bennet* (as given by Dr. Despine) to *Barrett*. Prof. W. F. Barrett, no doubt, is meant, for this experiment is described in an article by him "On Some Phenomena Associated with Abnormal Conditions of Mind," published in the "Proc. Soc. Psych. Res.," p. 238. July, 1883.—*Author's note.*

versity of Edinburgh, quotes a similar case, but I have not his book at hand.[1]

14. The Count de Maricourt,[2] from whom we have already quoted a few lines, gives the following narrative :

"It has often happened to me to be staggered and nonplussed by the clairvoyance of somnambules, who told of impressions or divined sentiments that I could have wished to keep secret from them. As I lived in association with these persons, the fact may be accounted for by the habitual community of thought existing between us. To put aside this cause of illusion, I tried an experiment upon a person entirely unknown to me. A professional magnetizer was at the time exhibiting in Paris a certain somnambule, about whose performances marvelous stories were told. She knew the past, the present and the future, understood all languages, and above all divined the most secret thoughts. The seances were held in a large hall on the boulevards. You had only to give her your hand and concentrate your thought upon any object whatever, and she would tell you, following your thought, what the object was. I saw several gentlemen interrogate her thus tacitly. One of them thought of a murder, of a duel he had witnessed ; another made her a witness of some battle scene, of a shipwreck, or of a fire. The somnambule's descriptions seemed fully to convince her patrons. As I did not believe in the supernatural, I did not wish to be fooled by jugglers. These gentlemen, who were unknown to me, might easily enough be accomplices. 'It is not necessary (said the Barnum of the establishment) to entertain the somnambule with tales of horror and disaster only. On the contrary, I should say you fatigue her by occasioning painful emotions.'

"I, too, wished to experiment in my turn ; in accordance with the advice of the manager, I called up a pleasant memory inwardly, going back to a remote place in the country, and to a time some few years before."

The author here recounts the whole story of a feast in which the dominant figure is a drunken man, with red nose and a very comical face, whom he describes in detail.

"I said not a word (he continues) to the somnambule, but to this vision of the past I strove to give, in my mind, the luminous distinctness of a photograph. 'Oh, what a ridiculous phiz! (exclaimed the seeress after a few moments). What a phiz, what a phiz, my God!' Her almost convulsive laugh had in it something so infectious that the whole company shared her jollity.

"This time I had to confess myself entirely convinced. To the faculty—unexplainable by the play of the organism—of seeing thus into the minds of others must be attributed the alleged facts of somnambulic polyglotism."

This experiment is not quite conclusive, for jollity being the order of the day after the magnetizer's speech, the somnambule divined only the mental image of a phiz. But granting this not to have been

[1] Gregory, "Letters on Mesmerism and Clairvoyance," Edinburgh, 1852 ; Morin, *op. cit.*, p. 168.

[2] R. Comte de Maricourt, "Souvenirs d'un Magnétiseur," p. 96 *et seq.* Paris, 1884.

pure chance, the experiment is instructive in this, that the humorous, comic element, being transmitted to the somnambule and producing laughter, hindered the transmission of all the objective images that were in the mind of the Count.

Another experiment that I find in the same book is more convincing:

15. "I was walking with a patient whom I had endormed beforehand. [There is nothing unusual in this walk. In active somnambulism the subject presents all the appearances of a waking person. If the somnambulism, however, is not deep enough, the subject may be awakened by a current of air. In other cases you might throw the subject into water or into a fire without awakening him.] She was paralyzed in the legs and could walk only in the magnetic sleep. [This, too, is seen often enough in hysteric paralysis.] As we passed in front of a field, the owner of which I knew, I asked her *to tell me his name*, and at the same time pronounced the name inwardly; I had some difficulty in obtaining a satisfactory reply. [Observe, the patient was in an active polyideic state.] The subject declared that she could not tell it to me; I insisted, and the name was pronounced as I wished. It is, you see, a hard job (*fait brutal*), for the subject has to see what you think and what she cannot guess. No more striking instance of thought-reading can, I think, be found" (p. 123).

16. Dr. Puel, author of a memoir on catalepsy that was "crowned" by the Academy, also made one of his cataleptics divine words he thought of; only he made the task light by indicating the terminations. He would say to the patient: "Tell me the word I am thinking of; it rhymes with——" (clairvoyance, for example), and the subject gave it without hesitation.[1]

17. Dr. Comet, editor of medical journals and a distinguished writer, was a thorough unbeliever in somnambulism, and had often amused his readers by ridiculing the wonders of lucidity as reported by magnetizers. In 1839, his wife, having fallen ill, had a fit of *natural somnambulism*, and became lucid. Mr. Comet (whose testimony has the more weight, inasmuch as it dealt with facts that he had considered impossible) sent to the Academy of Medicine a detailed report and published the same in the journal *L'Hygie*. To mention but two of Mrs. Comet's feats, she would describe every little object held in the closed hand and divined thoughts *that related to her*.

I pass over other feats that have to do with another question, that of clairvoyance, that is, when the subject sees or divines things that cannot be known to the persons around her. After quoting the description of these curious facts as found in Dr. Comet's "Report," another physician, Mr. Frappart, adds: "Surely it must have cost its author dear, for but the other day he was one of the most determined opponents of magnetism." But Mr. Comet "did not go there by four roads," and here is what he himself wrote in his "Report:"

"The unfortunate ailment of my wife carries with it a consolation, for it will bring to unappealable judgment a question that has been the subject of much discussion in this Academy and in the press, wherein I have taken an active part—I speak of the lucidity and

[1] A. S. Morin, "Du Magnétisme et des Sciences Occultes," p. 177. Paris, 1860.

clairvoyance of somnambules and the wonderful things they do. Three months ago I myself did not believe them, and to-day I regret my having characterized them publicly as fraudulent devices and catchpenny tricks."

There is a piece of advice for hypnotizers who are doing the same thing to-day!

But as for the hope that Dr. Comet fostered, in the belief that the Academy would profit by this occasion and decide, as the highest court, a question that so profoundly concerns the progress of science —what an illusion!

The Academy could not refuse to name a commission that was asked for by an esteemed member. The commission even went twice to visit Mrs. Comet; but after remarking that the case had some extraordinary features, in dealing with which they might compromise either their sagacity or their renown, they hesitated about going on.

"I notified all of them this morning," wrote Mr. Comet, "and I count upon them for this evening"—the business being to verify a prediction made by the patient. "The fact is of sufficient interest to science and humanity for them to take cognizance of it." "Be not deluded," answered Dr. Frappart, "not one of them will come, either to-night or to-morrow, or later, for a man carefully holds aloof from the truth that hurts him."

In fact, no member of the commission went.[1]

18. A well-known physicist-prestigiator, Mr. Robert-Houdin, took a greater interest in these questions. We have already mentioned his imitating second-sight and thought-transmission, by means of a very ingenious trick. At the outset he was very incredulous about somnambulism. Nay, accustomed as he was to perform wonderful feats, he made light of marvels, and believed he held the secret of them all; and he, too, regarded the extraordinary performances of lucid somnambules as clever tricks. In many towns where somnambules had been successful, he amused himself by counterfeiting their doings, and even surpassing them. Mr. de Mirville, the famous demonologist, who, in his system, has need of somnambulism, thereby to do honor to the spirits infernal, conceived the ambitious project of converting so doughty an adversary. With good reason he judged that should he succeed in proving to Robert-Houdin that lucidity belongs to a class of things entirely foreign to his studies and his practice, the testimony of so expert a judge would be of great service to the cause of magnetism. So he took him to see the somnambule Alexis. Mr. de Mirville, in his book on "Spirits," describes the scene.

Mr. Morin, from whom I borrow this passage, and who wrote a *spirituel* but skeptical book on magnetism, declares that Robert-Houdin assured him of the exactitude of Mr. de Mirville's narrative.

"I was amazed, confounded (says the prestigiator). Here was neither trick nor jugglery. I was witness of the exercise of a higher,

[1] Dr. Frappart, "Lettres sur le Magnétisme," 1839, 1840; Dr. Comet, "La Vérité aux Médecins," 1869; Dr. Charpignon, "Physiologie," etc., p. 116, 1848; Morin, "Du Magnétisme," p. 176, 1860.

an inconceivable faculty whereof I had not the slightest notion, and in which I would have refused to believe, had not the facts come under my own eyes. So great was my emotion that the perspiration streamed down my face." With other experiments he mentions the following :

19. "Alexis, seizing the hands of my wife, who accompanied me, spoke to her about past occurrences, and in particular about the very painful loss of one of our children ; all the circumstances were recounted accurately." [In this case, the somnambule read in the mind of Mrs. Houdin her recollections and her sentiments, which were more or less vivid in her consciousness.]

Another feat of the same somnambule simulates vision and clairvoyance at the same time, as in the case last mentioned, by transmission of recollections.

20. "We had with us a physician, a strong unbeliever, Dr. Chomel, who, desiring also to study the matter for himself, presented to Alexis a little box. The somnambule felt of it without opening it, and said, 'It is a medal ; it was given you under rather singular circumstances. You were then a poor student, living at Lyons in an attic. A workman to whom you had rendered some services found this medal among refuse, and thinking it might be of some interest to you, climbed your six flights of stairs to offer it to you.' This was all true. Certainly here are facts that one can neither guess not hit on by chance. The doctor shared our admiration for the feat. I gave to Mr. de Mirville the certificate he asked of me, stating that the facts I had witnessed surpassed all that can be done by sleight-of-hand."

Another quotation from the same author will be found interesting for the very reason that it mentions some mistakes made by the somnambule :

19. "Some months after, I went a second time to consult Alexis. I did not find him as lucid as at first. I was specially impressed by one feature. I presented to him a letter I had just received, and which had not yet been opened. [But Mr. Houdin *knew* whom it was from.] It bore the Boulogne post-mark. Alexis told me it had come from England, which was true, and gave me a *pretty correct* description of the writer. He made a mistake in saying he was a book-seller ; I took him up, and then he said he saw him in a room filled with books and like a book-seller's shop ; and such in fact was the appearance of the sitting-room of my correspondent."[1]

When we recall a person to mind, we automatically (*machinalement*) recall also his surroundings, the background on which his silhouette is limned by memory ; and doubtless it is this fleeting image that was communicated to the somnambule and led him to say, *conjecturally*, that the writer of the letter was a book-seller. Note again, that the seer did not tell Mr. Houdin what was in the letter : that was a detail of which Houdin himself was ignorant.

Facts like these last are usually classed as feats of clairvoyance, or

[1] A. S. Morin, *op. cit.*, p. 180.

are confounded with others which, if they are correctly reported, seem really to exhibit a faculty different from the one we are considering here.

And, strange to say, there are in the history of magnetism, even though we restrict ourselves to observations made by scientific men, more facts of clairvoyance, relating in particular to questions of the health of patients, than there are facts of mental suggestion properly so-called. It is true that in many cases of somnambulic consultation, we must absolutely presuppose the *mental influence of the physician*, unless we are willing to accept explanations more extraordinary still, or totally inadequate.

Baragnon distinguishes mental transmission from lucidity; he is right, for what is called "clairvoyance" (I do not mean to discuss here the value of that "faculty," not having studied it sufficiently) presupposes a state *rather more polyideic* than the one that favors passive transmission. Lafontaine, too, had too much experience not to have noticed that the transmission of sensations of thought and of will does not imply lucidity. He even observes that often they who consult somnambules do in reality consult themselves, the somnambule merely reproducing their thoughts. But Baragnon is more explicit. "There may be," says he, "thought-transference without clairvoyance, just as there may be clairvoyance without thought-transference: the two phenomena are independent." He names as conditions favoring thought-transference these:

1. "A close sympathy of the magnetizer with the subject.

2. "A sleep cheerful (*gai*), free; highly developed magnetic vision.

3. "Transmission of sensations as a basis."

As for the first condition, nothing more needs to be said. Plainly, *sympathism* is more facile where *sympathy* already exists.

With regard to the second, I am a little surprised to find that the sleep must be *cheerful* and *free*, for to me such sleep seems less favorable to true transmission, though it is highly favorable to divination by conjecture.[1]

By "magnetic vision" Baragnon understands the faculty that many somnambules possess of making their way about and finding their bearings though their eyes be closed, even in places unfamiliar to them, or in the dark. It is far less exact in details than ordinary vision, but, according to this author, it becomes very accurate when an organism is put in rapport with the somnambule.

[1] "Cheerful and free sleep" is not a happy phrase, and does not render with precision the French *sommeil gai et libre*. The meaning of "gay," "free" sleep, is perhaps best obtained by looking at its opposite, namely, magnetic sleep in which the somnambule is more or less *inert* mentally, say, *without initiative*, and is *restricted* in his psychic action. In other words, "gay, free," = *polyideic*.—*Translator*.

We must not be too ready to ridicule this *magnetic vision.* I cannot analyze here the question of *vision with closed eyes*, which, indeed, I have studied but little, and I do not yet admit the existence of such faculty. I believe that in the cases in which it has been supposed by competent observers to exist, for example, the case reported by the Academy Commission, it may be regarded as an exaltation of vision, that is to say, *vision through the eyelids.* But what Baragnon calls "magnetic vision" is a complex phenomenon, sometimes independent of the visual organs—rather an exaltation of *touch* or more probably an *elective and limited exaltation* of all the senses, sometimes of those of touch and hearing, sometimes of sight and smell, etc. That is what I mean by elective, or specificated hyperæsthesia.

When the magnetic sleep is thorough, the subject is insensible, deaf, and blind to all that takes place outside of the magnetic "rapport." But in turn his senses are hyperæsthesic with respect to the magnetizer, or of any object upon which he fixes his attention. The apparent contradiction must not shock us. The senses are unchanged, but the state of the *brain* may modify their action in the direction of *plus* or of *minus.* In the first place, the same quantity of nervous energy may, instead of being expended on all the senses, be concentrated upon one at the expense of the rest; then, in the same sense (touch in particular), it may be concentrated in one region, in a single point, at the expense of the rest (the hysterogenic zones belong to this class); finally, this displacement may be still further specificated by a *brain-adjustment.* A mother that is not awakened by a loud knocking at night, is up with a leap at the faintest cry of her babe, because her brain is adjusted for that kind of impressions only. There is an *unconscious attention* that watches without interfering with sleep. One forms the intention of awaking at 5 o'clock in the morning, and at the stroke of five awakes; and so on.

Somnambulism shows us magnified what is exhibited on a small scale every day of our lives. The magnetizer is for his subject like the figures at the opera that are illumined by an electric light. He alone is visible, around him all is darkness; but he it is that holds the reflector, and he can project the light whither he will.

The somnambule "sees" with closed eyes his magnetizer, or at least translates by the term "vision" *all* his concentrated and exalted sensations, which come from the magnetizer. He feels his presence, knows whether he is to the right or the left, whether he is walking or motionless; to a certain extent, he senses even his gestures; all this through perception of air-movements, of warmth, of cutaneous odor, of noises made, of tones of voice, etc.; and these impressions being by habitude associated with visual images, the somnambule translates them into terms of vision.

"Magnetic vision," in this sense, is, of course, a favorable condition

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MENTAL SUGGESTION

PART IV.

to the matter in hand, may be thus stated: *Nothing in the exterior of a living organism is accidental.* We need but to know the causal relations that indubitably exist. But we are still far from that consummation, and I even believe that, the sooner to reach it, it were well, instead of formulating the laws of physiognomics—it is yet too early for that—to continue the study of *pathognomy*, to the revival of which Darwin lent the weight of his high authority.

The expression of states more or less fleeting, of diseases, pains, emotions, attention, and will-tendencies, is a far more convenient subject of experimental research than the expression of characters by fixed traits, which for a long time to come we shall be able to judge of only by a sort of intuition based on *unconscious experience.*

It is nevertheless certain that they who from childhood have been in the habit of observing, are able to read with close approximation to the truth a man's character in his physiognomy. In the case of sharp contrasts error, indeed, is almost impossible. The somnambule might possess the same faculty, and turn it to account in divining feelings, tendencies and habits.

And here is another point worthy of notice with regard to the divination of *diseases.* There is a certain work, now very rare and quite forgotten, that is unique in its kind. Its author was a distinguished physician, professor in the University of Freiburg, Dr. K. N. Baumgärtner, and its title is "Physiognomice Pathologica: Kranken-Physiognomik" (Stuttgart and Leipsic, 1839). It is a big quarto volume, with an atlas giving the physiognomic types of all the chief diseases. The figures, which are nearly of life size, are painted *by hand* and after nature, by excellent artists. Highly interesting to the physician is this crystallization, so to speak, of pathological signs that enable you to distinguish *by the countenance* a disease of the heart, for instance, from a disease of the uterus, and which thus prove that all is reflected in the face. Many experienced physicians possess this faculty of appreciation. It may be possessed in a certain degree by somnambules, in virtue of their lifelong unconscious experience, which, though in the waking state, amid the pressure of conscious acts, they perceive it not, may manifest itself in the psychic isolation of somnambulism.

So, too, with regard to the signs of emotions; and Morin should have noted in particular the modifications of the *voice*, which, even against our will, betray our sentiments, and especially our approval and our doubts. Divination of a thought depends sometimes upon these faint signs. "The physical is the expression of the moral," justly observes Morin; then he concludes:

"The lucid subject that penetrates one's thoughts does only what is done by the phrenologist, the physiognomist, or the chirognomist, only he sees a host of material signs that elude our sight and that are the complement of the indications furnished by examination of the

skull, the visage, or the hands. The lucid subject therefore possesses only means like those we possess, but his are much more extensive. Observation of the organs is everything. He is unable to explain, either to us or to himself, the value of each sign; it is a sort of language that he comprehends instinctively without knowing its principles; nor need that surprise us, for we all are acquainted with the first elements of that language, without having learned them, and though we are unable to formulate its rules. . . . Suppose that at a party some one happens to talk of matters the mention of which angers one of the persons present, and that the latter lets his feelings find expression in his countenance; everyone will notice it, and it will be said, for example, that the man is angry, or meditating revenge, or that his hate is restrained by fear, and so on. But ask the company what were the physical signs that revealed so many things to them, and they will answer that they do not know, but that they are sure of the correctness of their judgment, and that the sentiments in question were manifested in such a way as to leave no room for doubt. In like manner, the somnambule that reads the thoughts of others cannot tell how they are manifested to him; all that he knows is that he *sees* them."

In short, as Morin himself puts it, "the question is simply one as to *the way in which somnambules see material objects.*"

Precisely here is the weak point of the theory.

In the first place, it is not well to leave out of view the sensations of hearing and smell; then, as the somnambule's eyes are shut, or, at least, he does not use them to divine thoughts, Morin's theory does but refer back an unsolvable problem to another not less so—"How do somnambules see material objects?" But that is another question. As for us, we do not care even to touch it; yet one might be tempted to suppose that Morin, who, to explain thought-communication, refers it to *somnambulic vision*, is able to explain for us the latter. But no! He rejects all known hypotheses and "confesses his ignorance."[1]

So we are back at our starting-point.

We would add that Morin's theory (though it may apply in certain cases) does not explain the experiments wherein the subject turns his back to the operator and has his eyes blindfolded; and *a fortiori* it does not explain any action from a distance.

Mr. L. Figuier[2] has broadened this theory, still accepting the same principle. According to Figuier, all is explained by an exceptional exaltation of the senses and of the intelligence in the state of sleep. The somnambule has no other sensations but those of our senses; but his perception being exalted, he perceives the faintest signs, voluntary or involuntary, proceeding from the magnetizer, and through these

[1] "Du Magnétisme et des Sciences Occultes," p. 271.

[2] "Hist. du Merveilleux," vol. iii., pp. 408–11. 3d ed. Paris, 1881.

divines the magnetizer's thoughts. "The transient exaltation of the senses of the magnetic somnambule," says he, "explains, we think, the phenomenon called by the magnetizers *suggestion* or *penetration of thought.* When a magnetizer announces that his somnambule is going to obey an order mentally expressed by him, and when the somnambule performs that feat—a thing, by the way, that is pretty rare—it is not impossible to account for the seeming miracle which, were it real, *would upset all our physiological notions*, and, indeed, all the known laws of animated nature. In this case, a *sound*, a *bodily movement*, a *sign of whatever kind*, an impression imperceptible to the rest of the company, suffices, in view of the extraordinary tension of the somnambule's principal senses, to enable him to understand, without any supernatural means, the thought that the magnetizer wishes to communicate to him. Thus, no more in this case than in others, is the magnetized individual privileged to break through the common barriers with which nature has hemmed in our powers."

Of course; "*Ad id sufficit natura quod poscit*," as Seneca said. But since that Stoic's day "the common barriers of nature," though they have not been broken through, have been set pretty well back, and besides, if there is any theory which might have checked the development of all the notions of modern physiology, assuredly it is the theory of insuperable barriers, had it been accepted before those notions were acquired. Who shall say just where those barriers stand? A metallic plate, for instance, can that talk like a human being? yea or nay? Mr. Bouilland—and he was no common man—said no; to accept such a fact were to upset all our notions of physiology. So said Mr. Bouilland right in the face of Edison's phonograph in full Academy, and he throttled the luckless interpreter of the famous American inventor, accusing it of ventriloquism.

But why and how must mental suggestion upset all our notions of physiology?

Not *all* of them, surely! I hope the theory of digestion, at least, for one thing, may stand unmoved. So, too, the theory of blood circulation, as well as the theories of respiration, reproduction, etc.

The *theory of perception* alone is at stake. But can it be that the existence of some subtile mode of transmission does away with the facts and the laws of a transmission that is visible and palpable? Did the invention of the electric telegraph do away with railroads?

No, we must not overstrain the maxim—a very wise one in its way—which recognizes certain natural limitations of all science. Let us not be more naturalistic than nature herself; let us leave to her the initiative of opposition.

In short the theory of Morin and Figuier, though these admit the *facts* of mental suggestion, does not account for those facts as a whole, and is hardly applicable to cases where there is anything like

definite transmission, many of which are cited by those authors themselves. Still, it is not to be denied that their theory might to advantage be developed so as to help explain a great number of mixed cases in which the *normal perception exalted* is combined with true transmission. Further, it must be allowed to possess this advantage, that it rests on an eminently scientific principle, that of referring the unknown to the known *as far as possible.* Only, I think it applies it amiss.

Anyhow, it is an evasive hypothesis. It turns the difficulty round instead of facing it.

Come we to theories that frankly accept the phenomenon.

CHAPTER II.

THE HYPOTHESIS OF BRAIN-EXALTATION WITH PARALYSIS OF THE SENSES.

IN the first place, we have to quote Bertrand. That eminent analyst did not, it is true, develop a complete theory of suggestion, but he did publish many clear ideas upon the subject that deserve to be mentioned.

Bertrand, too, does not believe in action at a distance, nor, in general, in any physical action whatever; he is the scientific father of the suggestional theory of magnetism. According to him, it is the subject that influences himself by imagination; *but the subject's imagination may be influenced by an extrane thought, even without any outward sign.* Thought is transmitted; will, not. Consequently, if the subject executes the order given, the reason is not that the magnetizer's will has acted on the subject's members, but that, having perceived the magnetizer's thought, the subject *consents* to execute it. "The Count of Lutzelburg, wishing to get light upon this subject, made the following experiment: He whispered in the ear of a witness that which he wished a somnambule to execute, and asked the patient if his thought determined her to act. 'I know it,' [the thought] she answered, 'and I execute that which you will. You willed, without telling me so, that I should sit down, and I obeyed.' . . . In general," adds Bertrand, "magnetizers nowadays [1823] seem to me to accept with inconceivable levity the opinion that the will of one man influences another man directly; but I know not any notion that

is more easy to overturn if one will but reflect upon it with some little attention. In the first place, there is nothing that is so inward to us as our will ; will alone constitutes personality, the Ego." (Bertrand confounds here several phenomena. Personality is not the Ego, nor is the Ego the will ; personality is a complex of all the psychic characters proper to the individual ; the Ego is but a focus, a central point of this complex whole ; the will is but a resultant of tendencies.) "And if the magnetizer's will took possession, as is supposed, of the person of the somnambule, the latter would be but an automaton actuated by springs extraneous to the magnetizer's second body."

Well, yes ! It does often happen that the somnambule is nothing but an automaton. Bertrand, taught in the humanitarian school of Puységur and Deleuze, knew nothing of our modern magnetizers with their hurdy-gurdies. Furthermore, he was one of those who asked of patients the permission to do them good. "For the rest," he adds, "I know not how it is that the believers in this influence of the will *are not appalled by the consequences to which it leads.* According to them, a heedless somnambule, an agent actuated by an impulsion from without, may seize a dagger and bury it in the breast of his own brother, being powerless to withstand the will that dominates him, and being unconscious of his act till after the crime has been perpetrated. Fortunately, the case is not thus, and all the facts that have given rise to the strange opinion I am arguing against are powerless to prove more than communication of thought and the *limited* influence that such communication may have upon the determinations of the somnambule."

Here, again, Bertrand is in error. The experiment has not been made with mental suggestion, but many a time with verbal suggestion, and it is entirely certain that in states more or less near to monoideism the subject may commit a crime he is ordered to commit, and that without a suspicion of what he does, even after he has done the act ordered. Resistance is not possible save in full somnambulism, and may be suppressed by a few passes. About five persons in 100 will be unable to make any resistance. But the question of morality must not be mixed with questions of fact. What's true is true, and that is all. If we were to be "appalled by the consequences" in studying a problem, we should never reach new results, for everything that is new appals the conservative. Was not Jesus Christ crucified on account of his "dangerous novelties?" Neither Socrates nor Kopernik dreaded the consequences of a truth : they left to others the trouble of condemning them.

Fortunately, times are changed. To Mr. H. A. Taine is credited the following reply when some one reproached him with publishing doctrines that might be dangerous : "I never have thought that a truth may serve for anything."

But it may serve for something, only we must not trouble ourselves about it in advance. And I am certain that the sway of the magnetizer's will over the magnetized subject, *when it is rightly understood*, will be productive of far more good than evil.

"So to sum up," concludes Bertrand, "I think it absurd to suppose that in any case an extraneous will can act *directly upon the organs of somnambules*, and still less upon their determinations [the first phrase is correct, the second erroneous]; but it seems to me that a number of facts sufficient to produce conviction prove that not seldom somnambules have *cognizance* of the will, or the thoughts, of those with whom they are in rapport, and that this cognizance may determine them to act and produce upon them the same effects as though one had spoken to them. I will add that as this phenomenon results from the *sympathic communication* of the brain-movements of him who gives the order, the somnambule will all the more easily know the order given to him if it be accompanied by some gesture, which, *as it cannot be made without a greater movement of the cerebral fibers*, will help the communication: this is what is confirmed by experience in every case, and this is what I myself have observed. Besides, the opinion I express has been adopted by many magnetizers."

It is readily seen that the sharp distinction drawn by Bertrand between thought-transmission, which he accepts, and will-transmission, which he rejects, is a rather idle distinction. He had need to make yet another in order to be entirely right, namely, a distinction between direct action of will upon the peripheric organs, and transmission of will to the brain. As for the muscles, for example, it is nearly certain that without a local physical excitation of the tendons or the nerves, it is impossible to set them in motion by the act of an extraneous will; but that is not what is implied by the phrase "suggestive will-action." And once thought-transmission is granted, there is no reason for an outcry against those who believe that the tendency to any movement whatever may be transmitted as well as a purely passive and objective idea. As soon as you awaken a sentiment, you awaken also a tendency that is proper to it. Now, Bertrand does not deny the transmission of sentiments. Consequently, it being understood that the phenomenon cannot occur, *save by a reflex action of the brain*, there is no longer any need of drawing a hard and fast line of distinction between *will* and *thought*.

Bertrand has always in view a polyideic state of the brain, and that is what leads him astray. When there are many thoughts, they may resist the execution [of the order], and if it is executed, it is so only through the consent of those thoughts. But what if there are not many thoughts? When all opposition is done away by the state of aideia or of nascent monoideism, will not the thought "inoculated" [into the subject's mind] and made dominant by the very fact of its

isolation, determine execution? And it is just in that state that we must make direct experiments.

As to the *how* of the transmission Bertrand has hardly anything to say. But he seems to regard *exaltation of the brain* with *paralysis of the external senses* as an essential condition, and he very justly compares the sympathism of diseases, which he verified many times, with sympathism of ideas, which is more rare.

"Communication of ideas," he says, "is oftenest presented by *ecstatic* somnambules, and that, I think, is due to the fact that their state of moral *exaltation* could never have been produced without a considerable augmentation of the brain's sensibility, an augmentation that promotes, betwixt the brain of the somnambule and the brains of those around him, a sympathic communication like to that in virtue of which he feels, in other portions of his body, the pains of those in rapport with him." In another place Bertrand adds: "It has been seen that my will, though not expressed, had a true action upon the patient *in the state of paralysis*, and had no action that was instantaneously perceptible in the waking state."[1]

We shall see further on the importance of this simple remark.

CHAPTER III.

THE HYPOTHESIS OF DIRECT PSYCHIC ACTION.

BERTRAND'S sympathism, while it is not clear, has nothing mystical. It was a sort of *induction*, in the electrical sense of the word. A thought was supposed to induce a like thought, as an electric current induces a like electric current. Nothing passed from one brain to another brain. Was that an action at a distance—a very small distance (for Bertrand did not believe in anything else)? Doubtless it was, but Bertrand has not pronounced any judgment on the question. The transmission has not been explained.

Several magnetizers have tried to fill the gap by supposing *something that passes* from brain to brain, and naturally have attributed to this intermediary qualities now psychical, again physical, according to the bias of their several minds.

Let us consider for a moment the first hypothesis. My soul acts upon another soul. What more natural than to suppose a real trans-

[1] "Traité du Somnambulisme," etc., pp. 246–283. Paris, 1823.

ference of my thoughts? Such a supposition would cause no embarrassment to a spiritist. If my thought is able to move my body, and if my subject's thought can move *his* body, then to explain all I have only to suppose my thought to pass into his brain. How clear!

When the problem was to account for vision at a distance, the solution was simply that the soul of the subject, after quitting his body for a moment, went forth to see what was going on a hundred leagues away, and then came back and told what it had just seen.

It was a little awkward to leave the body so, without a soul. But the spiritists found a way out of that difficulty: the soul remained, the mind it was that made the excursion.

So with regard to transmission of thought. The soul (or mind if you will) not having any limits, as the body has, could easily stretch itself a little, so as to occupy for a moment an extraneous position, there perform whatever act was to be performed, and then double itself up and get back into its shell. Descartes recognized the impossibility of an action of thought upon extension (matter), but not upon another thought.

Consequently they might intermingle; and could anything surprise us in this affair, our surprise would be that this happened so seldom. We should rather look for a universal interchange. "Pass over to me your experiences and I will pass to you my hopes"—that would be a convenience! One man might go to school for the benefit of all, and then sell his ideas at so much a lot.

Unfortunately, the time is not yet come for this kind of commerce. We are even not quite sure whether a soul or a soul's thought can leave its body; or whether after it has quit the body it becomes more potent than it was just before. But that would have to be proved first of all.

Instead of supposing a direct passage [of thoughts], some spiritualists are pleased to allege an action equally mystical, but still more vague. "We know," (?) says Chardel,[1] "that obstacles and distances vanish for a lucid soul. It troubles itself no more about them: it gives itself up naturally to this new mode of investigation, and therein seems only to recover its manner of action *that is proper to it* [Chardel does not indicate the source of his knowledge], and which the loosening of the bonds of life has just given back to it."

It is as easy as to say, "Good morning!"

Others, without supposing a translocation or a mystical enlargement of the faculties, give us a glimpse of an almost physical "radiation."

"The mind,"[2] says the Grand Master of Spiritism,[3] "is not shut up in the body as in a casket; it *radiates* all around; therefore it can

[1] C. Chardel, "Essai de Psychologie Physiol.," p. 286. Paris, 1838.

[2] Or "spirit," *esprit.—Translator.*

[3] Allan Kardec, "Le Livre des Esprits," p. 185. Paris, 1862.

communicate itself to other minds,[1] even in the waking state, though more difficultly than in sleep."

That is pretty; but it would have to be proved that there exists an analogy between a soul and a lantern. And even that would not be enough, for a lantern only gives light, whereas a soul can command movements. True, a ray of light can make a Crookes radiometer to go round, but no one has yet determined what a ray of the mind is, nor what it can do.

The necromantic spiritists,[2] as we know, believe in a transmission of thought between embodied souls and disembodied spirits. "Spirits have only the language of thought; they have no articulate language," we are assured by Allan Kardec,[3] and we may take his word for it.

So, if a spirit has anything to say to us, it must needs employ an interpreter. The *medium* is the interpreter.

"It is the medium's spirit that is the interpreter, because it is connected with the body that serves to speak."[4] But in most cases this one intermediary is insufficient. "The *familiar spirit* is nearly always the one that acts as interpreter, to communicate to the medium the thought of the spirit evoked, when the latter is so exalted as not to deem it proper that he should come in person, or when other occupations hinder. Thought is communicated between spirit and spirit directly, and without the aid of spoken language. If you evoke a spirit that knows not your language, he transmits his thought directly to your familiar spirit, who translates it into the language that you know and that is familiar to you."[5]

Certain spiritualists have gone further still. They believe in the need of spiritual interpreters not only for a communication between a living man and an evoked spirit, but even between the magnetizer and his subject. "The influence that is exercised by one man on another man through the action of magnetism," says Dr. Billot,[6] "comes from an *auxiliary* either unknown or misknown, and only its presence can give the solution of the phenomena of magnetism."

This auxiliary is the world of spirits, good or evil—evil spirits particularly, the Marquis of Mirville assures us.

These authors take the exorcists' point of view: man cannot perceive the thoughts of men; therefore, if he seems to perceive them, it

[1] Or "spirits."

[2] *Spirites.* Here the author is speaking of spiritists of the Rochester-knockings sort: so to make the meaning clear I render the word as above, *necromantic* spiritists.—*Translator.*

[3] "Le Livre des Médiums," p. 271.

[4] *Id.*, p. 268.

[5] J. Roze, "Révélations du Monde des Esprits," p. 18. Second series. Paris, 1862.

[6] Billot, "Recherches Psychologiques," etc., vol. i., 12. Paris, 1839.

is because his guardian angel—or the devil—has whispered them to him.

We will not waste our time in examining these extra-scientific fancies. We would only remark that even if credulousness can carry men to these lengths, reckless incredulity is not a whit better. "Doubt," says Arago, "is proof of modesty, and has seldom hindered the progress of science. We cannot say as much of incredulity." For a striking proof of the result of a diseased skepticism, one need but read Mr. Mabru, "Laureate of the Academy of Sciences." That author wrote a book of 560 pages[1] to say that he sees nothing in magnetism (p. 5) in spite of all the letters he has written and all the conferences he has held. For him "magnetic somnambulism so-called does not exist any more than the fluid, and the phenomena that are attributed to somnambulism are nothing but pure illusion."[2] Puységur was fooled by his maid-servants, who simulated clairvoyance "to get higher wages," and so on.

He, too, supposes an interpreter for the phenomena of transmission, to wit, *a colluder*. "In order not to be duped by the clever tricks so often repeated in certain magnetic parlors, all that we have to do," says he, "is to *eliminate the colluder*. . . . There is no animal fluid, no *artificial somnambulism*, no magic, no sorcery; these pretended sciences possess in reality no scientific fact; and when, by means of immobility of body and strained attention, somnolence is produced in a sick patient or in a subject that is fatigued [but in fact this is done with healthy persons and persons whose senses are alert], the sleep is only common sleep. It possesses none of the miraculous properties of the so-called magnetic sleep. Often there are tricks of collusion; but these apart, it is utterly false that there exists between the *endormer* and his *subject* any relation, or any *psychic state*, except the ordinary relations of everyday life. Not only does the thing not exist, *but it cannot exist*."[3]

"There are errors," say Cabanis, "to which only wits are liable." Mr. Mabru has not this excuse, but he has another. La Bruyère says: "All the wit in the world is of no use for him that has none."

The other day Mr. Mabru was surpassed by a member of the Academy of Political and Moral Sciences. Mr. Mabru wished at least to learn; he asked for demonstrative facts. Mr. Desjardins, for his part, does not want to see anything, and will not suffer others to see. He condemns the study of hypnotism. He has not studied anything —that need not be said—but he is fully convinced that all the experiments in suggestion, whether of a therapeutic, a pedagogic or other nature, have been "pitiful failures." But they are hurtful and criminal, nevertheless. Not only the hypnotizers, but the hypnotized also, should

[1] E. Mabru, "Les Magnétiseurs Jugés par Eux-mêmes." Paris, 1885.

[2] *Id.*, p. 356.

[3] *Id.*, p. 483.

be punished, for "man has no right to abdicate his humanity and his free-will."

It is to be hoped that the honorable jurisconsult will not rest there. He ought to propose an enactment against those that sleep o' nights, seeing that it must not be permitted to a man to transform himself voluntarily into an inert mass and to abdicate his free-will. "As we might well expect," says Mr. P. Fauvreuil, "this eloquent protest has been approved unanimously and its author has been warmly felicitated. Mr. Arthur Desjardins has dealt hypnotism a stunning blow from which we hope it will not recover."[1]

Time will tell. Be it noted only that this took place August 13, 1886, thus in the 19th century, in France, in Paris, at the Academy.

CHAPTER IV.

THE HYPOTHESIS OF DIRECT PHYSICAL ACTION.

MOST magnetizers believe in the existence of a vital or magnetic nerve-fluid. A good deal of sport has been made of this fluid, and the subject, we must confess, invites such treatment. But those who have made many experiments are alone qualified to decide the question, and they tell us that often appearances are as though somewhat passed from the magnetizer over to the subject.

This subtile fluid is supposed to serve as an intermediary between mind and body. This it is that excites the muscles and transmits sensations to the brain ; this, too, it is that, under the impulsion of the will, *projects itself* outward and affects the nerves of the subject. Being of an eminently motile nature, if it is influenced by the environment as well as by the impulsions of the mind [or thought, *pensée*], it must reflect the man's personality, his feelings and sentiments, his will—it must be impregnated, so to speak, with the modifications of his mind. On uniting with another like fluid, though the same be individually different, it may transmit to it the same modifications. It is the fluid, then, that transmits thought, and the latter need not quit its body to act on another body.

This theory was first expounded by Lecat,[2] doctor of medicine and professor of physiology. His fluid is called the *animal fluid*, and it is

[1] *Soleil* newspaper of August 15, 1886.

[2] Lecat, "Traité des Sensations," pp. 154, 242. Paris, 1767.

interesting to find that as early as 1767 there was an effort made to account for certain mysterious transmissions. "This fluid," says Lecat, "being affected with the special character of a passion, carries the impression of it into the animal fluid of other individuals,"[1] for "sensations and impressions [or impresses—*pressions*] consist of modifications of the animal fluid, and these characters are communicated to fluids of the same sort, and are susceptible of change at every instant."[2] This fluid is an emanation, which the author, like most magnetizers, often confounds with odoriferous emanations. We quote one more passage:

"Once we recognize the evident facts that prove that the different characters of the animal fluid and of the vegetal fluids produce in the fluids of other individuals *emotions*, *changes of characters*, *considerable revolutions*, according to their consonance or dissonance, we shall have no difficulty in conceiving all the effects that result from their natural concurrence or from their conflict, of whatever sort they may be—intellectual, animal, or animo-vegetal."[3]

Such, in few words, is the theory of the magnetic fluid.

But why magnetic?

To answer that question, let us hear what is said of it by the chief advocate of this theory, J. P. F. Deleuze:

"A somnambule is sensible of [*saisit*] the will of his magnetizer, he executes what is mentally demanded of him. To understand this phenomenon we must consider somnambules as *infinitely mobile magnets;* no movement occurs in the brain of their magnetizer but is repeated in them, or at least they perceive it."[4]

But it was the more patent and more frequent phenomenon of *attraction* that suggested this analogy. Let the reader recall Bruno's experiment, which exhibits this phenomenon in an exceptional degree; but it is very common to see the subject's hand attracted by the approach of the magnetizer's hand, and following its movements. A magnet brought near to the subject produces the same phenomenon; and, though this action is not, properly speaking, magnetic, we know that such phenomena may well have determined the choice of the term "animal magnetism," which is not any worse than the term "electricity," as applied to certain well-known phenomena that have nothing to do with *electron* (amber).

Puységur, too, was struck by the analogy existing between a compass-needle and a mentally-suggestionable subject; but, as we shall see, he laid no stress upon this seeming analogy.

Deleuze makes yet another comparison: "We know," says he, "that if we place side by side two stringed musical instruments that are in unison, and twang the strings of the first one, the corresponding

[1] "Traité des Sensations," p. 154. [2] *Id.*, p. 549. [3] *Id.*, p. 242.
[4] Deleuze, "Hist. Critique du Magnétisme," p. 181. Paris, 1813.

strings of the second sound of their own accord. This physical phenomenon is like that which takes place in magnetism." [1]

According to this last analogy, the magnetic fluid carries the psychic vibrations as sound-vibrations are carried by the air.

And here is what this author says of action at a greater distance :

"Though it is very difficult to explain how the magnetic fluid can act from one apartment to another, most magnetizers are convinced of the reality of such action. I myself have made experiments that go to prove it. Nevertheless, that phenomenon being one of those that to me seem inconceivable, I invite magnetizers to examine it anew (1813), refusing to believe in it until they have verified it by their own experience. But light and sound travel to great distances, yet we cannot see in the motor agent that gives them forth a force sufficiently great to propel them rapidly, even through bodies. Whether light is an emanation from luminous bodies, or whether it is an undulation of ether, it is not easy to understand how the light of a coal or the flame of a candle makes itself visible instantaneously at a great distance through transparent bodies, or how the light of a star comes to us. Perhaps phenomena that we refuse to believe, because we have not observed them, are no more incomprehensible than other phenomena that do not astonish us at all, because we see them every day." [2]

He then adds this with regard to the conditions of magnetic action :

"In order that the fluid that goes out from me may act upon that of the man I magnetize, the two fluids must needs unite, must needs have the same tone of motion. If I touch with purpose and attention, and the one upon whom I wish to act is in a passive state or state of inaction, my fluid will determine the movement of his. There occurs then something like what takes place between a magnetized bar of iron and one not magnetized ; when you pass many times, always in the same direction, one over the other, the one communicates to the other its motion or its virtue. That is not an explanation, but a comparison." [3]

"Once the nerves are permeated by a certain quantity of fluid, they acquire a susceptibility of which we have no conception in the ordinary state. Regard the magnetized individual as *in some sense a part of his magnetizer*, and you will not be astonished that the will of the latter should act upon him and determine his movements. That is all that I can say about the principle of magnetic action and will-influence." [4]

Evidently it is not an explanation. But, then, neither Deleuze nor any of his successors ever flattered themselves that they had explained the whole mystery. They have merely insisted upon the necessity of accepting a physical action—in their language "emission of the

[1] "Hist. Critique du Magnétisme," p. 180.

[2] *Id*, p. 85. [3] *Id.*, p. 91. [4] *Id.*, p. 93.

fluid "—in order to understand as well as may be possible the different phenomena of transmission. "The will," says Lafontaine, "cannot act upon another body materially. Our will acts only upon ourselves by producing a more active secretion in the brain and contractions in the plexus: hence the emission of a greater quantity of the fluid, and greater intensity in the action. . . . We can, therefore, justly say that the magnetic phenomena have one sole cause, the *vital fluid*, and that here, as everywhere, the will is but an accessory. . . . The belief that the will acts upon the magnetized individual is founded on one of the effects presented in the somnambulic state. A somnambule of developed lucidity sees his magnetizer's thought and obeys the mental order. That is a transmission of thought; from it the inference has been drawn that the will to which the subject is thus obedient is the cause; but that is a mistake: cause is confounded with effect. The transmission of thought is but the result of *the special state in which the subject is*. If the magnetizer is not in the proper state of health and strength; if he is tired, exhausted by any overdoing or excess whatever, he will be able to do nothing, or next to nothing [he can hypnotize, however], even though he bring to bear all the will-power he has. If, on the other hand, the magnetizer is perfectly sound and vigorous, and magnetizes perfunctorily, distractedly, without clearly defined intention, *he will produce*, *nevertheless*, *positive effects*. . . . To end the magnetic state, one must *demagnetize*, must free the subject or the member on which one has acted, of all the fluid one has transmitted to him, and however much the magnetizer may *will* the member or the magnetized individual himself to be restored to the normal state, that willing of itself is insufficient; one has, furthermore, to act *physically*, and if one does not that, or does it slightingly, the result often is distress that may involve serious consequences."

That last remark, apart from the theory of the fluid, is fully justified. We often hear of the injurious consequences following a magnetization. Now, never—and I bottom my remark upon an experience of 19 years—never can a magnetization do any harm if the conditions are duly observed; on the contrary, it must always be more or less beneficial; the least favorable case is where the effect is null. But experiments made hurriedly, for the sake of the effect, by strolling magnetizers or by hypnotizers that have not studied the literature of the subject, are very often harmful, and the main cause of the untoward results is an *insufficient demagnetization*. The beneficial effect of the magnetization is reduced by one-half, and sometimes serious mischief is done, by a *premature*, *a too sudden*, *or an imperfect awakening*.

"The advocates of will-influence," says the same author, "seem to rely upon another example to strengthen their cause. When a

magnetizer, from a distance and without any movement, endorms a subject that he is in the habit of magnetizing, or even when he magnetizes a person for the first time, they assume that the will alone acts. That is a mistake. The magnetizer, by concentrating himself in himself, produces the emission of the fluid, which hits [*frappe*] the subject and endorms him. Here, as everywhere, there is simply a projection of the vital fluid."[1]

This theory is simple, indeed. Were there such a fluid it would be very convenient for explaining facts; and oftentimes, especially in the therapeutic application of magnetism, *we must act as if the fluid existed.* But, in the first place, it is certain that in very many cases the intervention of the fluid is theoretically of no use; and that even where we are compelled to recognize a physical *action*, it does not prove the transmission, nor even the existence of a special fluid. In a word, the theory of the fluid is too simple in view of the complex facts, and too complicated in view of the simpler ones.

But herein Lafontaine is perfectly right, to wit: in maintaining that, action at a distance once admitted, a *physical* action must be assumed. Thought, as such, can neither *walk abroad* nor *radiate* elsewhither than in a brain to it belonging, or to which it belongs. But since the emission or transference, as well as the very existence of a special vital fluid, is incapable of demonstration, we must seek a more positive principle to elucidate our problem.

CHAPTER V.

THE HYPOTHESIS OF A UNIVERSAL FLUID.

THE general belief is that Mesmer was the propounder of the theory of a nervic, vital, or magnetic fluid, which, becoming detached from our body, is projected outward, is borne at need through space, and so on. That is an error propagated by those who have not read Mesmer, or have been unable to understand him. The theory we have sketched—and it is a very ancient one—was elaborated by the collective efforts of several of his *indirect* disciples, and in particular by the revelations of somnambules, who explained things as best they could. Finally, the authority of Deleuze, who himself points out this source, easily won popularity for a theory that anyone could grasp, that was comprehensible to the uncultured imagination, and

[1] "L'Art de Magnétiser," pp. 25–34.

that seemed to explain all. But it was in flat contradiction to Mesmer's doctrine, which was known only to his direct disciples. His course of instruction has never been published entire; but the extracts from it that were published by Puységur, as well as his Aphorisms, his Memoirs, and certain fragments that lay long unpublished, prove sufficiently how inexact is all that is said about him.

They show him to have been a mind profound as well as original, that may well have parted with the qualities of modesty and disinterestedness that characterized him at first, for he had to face a universal outburst of derision, the like of which surely never has been heard. Mesmer understood somnambulism better than Puységur, who in his enthusiasm exaggerated its value; in some respects he understood it better than the hypnotizers of our day, who do not know even Mesmer's disciples. At first people were fain to call him charlatan; then little by little they began to *discover* what he had discovered; they merely altered names so as not to compromise themselves, but they left to him the title of charlatan. 'Tis brutal, but the fact is thus.

I will state Mesmer's theory as far as it concerns the problem in hand:

Whatever is amenable to investigation may be expressed in two words: *matter* and *motion*. But to reach this conclusion we must efface from our cognitions the superficial impress given to them by the senses. "We acquire all ideas through the senses: the senses convey to us only properties, characters, accidents, attributes; the ideas of all these sensations are expressed by an adjective or epitheton, as hot, cold, fluid, solid, heavy, light, shining, sonorous, etc. For these epitheta substantives have been for convenience' sake substituted; soon the properties were substantified; we say heat, gravity, light, sound, etc., and lo!—the origin of metaphysical abstractions."[1]

These substances[2] were multiplied, personified. Hence ghosts, divinities, demons, *genies*, archei, and so on. "We still retain a certain number of these entities, which we must eliminate in order to get a clear view of phenomena. That is in general terms the end I purpose to attain" (p. 18).

Matter presents several degrees of *fluidity*. Water is more fluid than sand, for it can fill the interstices between the grains of sand; air is more fluid than water, for it can be diffused through it; ether is more fluid than air. It is difficult to determine where this divisibility ends, but we may suppose there are still many degrees of this kind, and that there exists a universal primitive matter, the graduated concentration of which constitutes all the states of matter. However that may be, it must be allowed, according to Mesmer, that all space

[1] "Mémoire de F. A. Mesmer, Docteur en Medecine, sur ses Découvertes" (1778). Nouv. ed. avec des notes du Dr. Picher Granchamp, p. 17. Paris, 1828.

[2] That is, these *substantified* adjectives.—*Translator*.

is filled, and we may well call the fluid which fills all the *universal fluid.* "Some physicists have already," says he, "recognized the existence of a universal fluid, but they have erred in defining its characters, in overloading it with properties and specific powers [*vertus*] that we cannot have cognizance of" (p. 22). This fluid exists though we feel not its presence. It is all around us, and with regard to it we are nearly in the same situation as fishes, which no doubt would be much surprised were one of themselves to declare that all the space between the bottom of the sea and the surface is filled with a fluid in which they live; that in this medium alone do they come together and go apart, and that it is the one means of their reciprocal relations (p. 22). "The universal fluid is simply the sum of all the series of matter in the highest state of division through the movement of its particles."[1] By it the universe is fused and reduced to one mass. All that can be predicated of it is, that it is fluid by pre-eminence, and consequently that it must in particular govern transmissions of motion more subtile than those effected by other and better known fluids. Water can give motion to a mill; the air transmits sound-vibrations, the ether light vibrations, the universal fluid transmits life-vibrations. Each of these series answers to a degree of phenomena, and the vibrations of each of these series cannot be perceived save in a corresponding degree of the organization (*i. e.*, of the aggregation) of matter (p. 24). Neither heat, nor light, nor electricity, nor magnetism, is a substance, but they are effects of motion in the different series of the universal fluid. While it is neither heavy, nor elastic, etc., this fluid determines the phenomena of gravity, of cohesion, of attraction, etc., as results of the re-actions of the motion communicated.

Properly speaking, there is in nature no attraction; it is only a seeming effect of communicated movements, and in general all properties, all so-called forces, are but *a combined result of the organization of bodies, and of the movement of the fluid in which they exist* (p. 25). This fluid it is that governs the mutual influences of all bodies; and as these actions and re-actions are, so to speak, symbolized in the mutual influence of the magnet and iron, we may give the name of universal magnetism to this general mutual influence. Nothing is exempt from this influence, which may be more or less inappreciable, but which theoretically has no limits. The heavenly bodies act upon us and we re-act upon the heavenly bodies, as well as upon the bodies around us. The property of the animal body that makes it capable of such action and re-action may be called, by analogy with the magnet, animal magnetism (Aphorism 8). Consequently, magnetism, whether the universal or the animal magnetism, is not a fluid, but an *action;* motion, not matter; transmission of motion, not an emanation

[1] *L'ensemble de toutes les séries de la matière la plus divisée, par le mouvement de ses particules.*

of any kind. No *displacement* can take place without *replacement*, for all space is filled (p. 39), and that presupposes that if a motion of the subtile matter is produced in one body there is forthwith produced a like motion in another similar body *capable of receiving it*, whatever the distance between them (p. 39).

"Considering," adds Mesmer, "that reciprocal action is general between bodies, that the magnet furnishes us with the model of this general law, and that the animal body is susceptible of properties analogous to those of the magnet, I hold the term animal magnetism, which I have adopted, to be fully justified. . . . I see with regret that this phrase is thoughtlessly abused; when one has familiarized himself with it, he flatters himself that he possesses the idea of the thing, whereas he has only an idea of the word. As long as my discoveries were regarded as chimæras, the incredulity of some savants left to me all the glory of the discovery; but since they were compelled to recognize its reality, they have taken to quoting against me the writings of the ancients, in which occur the phrases, 'universal fluid,' 'magnetism,' 'influence,' and so on. We have to do not with words, but with the thing, and, above all, with the usefulness of its application" (47).

Life is but a manifestation of a subtile motion, the stoppage of which is death. Among these subtile motions, sensations hold a chief place; all actions are the results of sensations (p. 49). The sense-organs correspond to different degrees of subtility in the vibrations that influence us, and they are not capable of being influenced save by a special sort of vibrations. But nerve-matter itself, as the supreme product of organization, is capable of being influenced directly by the most subtile vibrations of the most subtile matter: to wit, the universal fluid. This faculty, hitherto overlooked or misconceived, Mesmer calls the *inner sense* (*sens intérieur*).

Here I remark that this term recurs oft in the history of psychology, but in a different sense. Even Aristotle deals with this question. After him Albertus Magnus, Occam, Giordano Bruno, Cremonius, and many others, speak of a *sensus interior*, or even of *sensus interni*. But the term has been employed either in the sense of a *sensus communis*, bringing together all sensations, or in the sense of perception and consciousness of oneself.

Commonly the psychologists did but travesty the problem posed by Aristotle: "Must we suppose a sixth sense to see what the eye sees, to hear what the ear hears, etc.," or else (as in modern psychology) they gave the name "inner sense"[1] to the faculty of perceiving

[1] This faculty is what Sir William Hamilton calls the *vital sense*, synonyms of which are "subjective sensation" (Huxley), "cœnæsthesis," "vital feeling." It is, I believe, called by French physiologists *le sens de la vie*—the sense of life; the feeling we have of our own vital processes.—*Translator.*

the inward bodily sensations (*Selbstempfindungen*). The meaning given to it by Mesmer is different. He believes that nerve-substance in general and the gray matter in particular can be affected directly by the vibrations of the universal fluid. Herein he sees a source of vague cognitions, commonly inappreciable, particularly by man, in whom the sense-impressions and the development of reflection smother these faint perceptions; but in the animals, whose senses are less perfected, this *purely cerebral* sensibility makes up for the imperfection of the senses, and in many ways takes their place. It puts them in relation with all nature, enables them to divine directions in space, to forefeel terrestrial or atmospheric changes, and in general forms the sort of unconscious experience to which we give the title instinct. In man this faculty manifests itself only exceptionally, in normal sleep and especially in somnambulism, when the ordinary senses are in abeyance and there are no conscious thoughts to overpower it. "If it be true," says he, "as I shall endeavor to show, that we are affected by the enchainment of things and of events that succeed one another, we may see the possibility of presentiments and other like phenomena" (p. 50).

In the state of "crisis" the somnambule's senses may extend to any distance. All nature seems to be present to them. Even dictates of will are communicated to them without regard to any of the conventional means. These faculties differ according to the individual (p. 52); the most usual phenomenon is for a somnambule to see the interior of his own body, or even of others' bodies. But it is a rare thing to find all these faculties in the same person.

"How can a man receive the impress of a will not his own?"

"This communication can take place between two individuals in the normal state only when the movement resulting from their thoughts is propagated to the vocal organs, and to the parts that serve to express the natural or the conventional signs; these movements are then transmitted to the air or to the ether as intermediaries, and are received and sensed by the external sense-organs. These same movements, thus modified by thought in the brain and in the nerve-substance, being communicated at the same time *to the series of a subtile fluid with which that nerve-substance is in continuity*, can, independently and without the aid of air and ether, extend to an indefinite distance and report direct to *the inner sense* of another individual."

"From this a notion may be had of how the wills of two individuals can communicate by their inner senses, and consequently of how there may exist a reciprocity, an accord, a sort of understanding between two wills, which relation we may designate as *rapport*" (p. 75).

"As this sort of sensations are not to be had, save through the mediation of fluids as far excelling ether in subtility as ether excels common air, the means of expression fail me: it is as though I wished

to explain colors in terms of sound. I therefore must needs supply the deficiency with the reflections that may be made upon the constant *pre-sensations* of human beings, and more particularly of animals, with regard to the great occurrences of nature at distances all too great to be spanned by their ostensible organs ; upon the irresistible attraction that causes birds and fishes to make their periodic migrations ; finally, upon all the relevant phenomena furnished to us by the crisis-sleep [*sommeil critique*] of man " (p. 77).

These pre-sensations may relate also to the past or to the future, for to see the past is simply to perceive the causes in the effects, and to see the future is to divine the effects from the causes. Whatever *has been* has left traces ; so, too, whatever *is to be* is already determined by the concatenation of causes (p. 76).

But why is the state of sleep better fitted than the waking state to manifest these different transmissions? Mesmer answers that question with the utmost precision. The reason is twofold:

1. Because in sleep the sense-functions are suspended (p. 77), and the continuity of the common sensorium with the external organs more or less broken. "The impressions of circumjacent things, therefore, are made, not upon the external organs of sense, but directly and immediately upon the very substance of the nerves. The inner sense thus becomes the sole organ of sensations" (p. 78).

2. Because, in consequence of the senses being in abeyance, the psychic functions of conscious memory, of imagination, reflection, etc., which depend upon the senses directly or indirectly, are also suspended, and consequently the impressions made direct upon the cerebral substance "become perceptible by the very fact that they stand alone" (monoideism). "As it is the immutable law of sensations that the stronger effaces the weaker, the latter may be perceptible in the absence of the former. If the impression of the stars is not perceptible to our vision in daytime as it is at night, though their action is the same, the reason is, that in the day it is effaced by the superior impression made by the presence of the sun" (p. 78).

For individual transmissions from man to man we have to recognize two other conditions:

1. That of *rapport*. The special action between two individuals is facilitated by a sort of *accord*, by the production, natural or artificial, of a like *tone* of motion or of a like tonic motion, which makes a brain more susceptible of a vibration belonging to the same category (pp. 24, 75).

2. That of *education*. For the perfection of this crisis-sleep not only varies according to the process [*marche*] of the crisis, and the temperaments and habitudes of subjects, but also depends very much upon a sort of education that can be given them in that state, and on the way in which you direct their faculties; in this respect the sleep

may be compared to a telescope, the action of which differs according to the means of adjustment (p. 81).

In a state favorable to transmissions of all sorts man enters into relation with all nature, and we might compare him to a liquid whose surface, being in perfect equilibrium, reflects like a mirror everything in the universe, faithfully pictures all objects. But fancy that surface ruffled by all sorts of shocks (impressions made upon the ordinary senses), and you shall see the liquid agitated by innumerable undulations and re-actions, and the reflection of objects will disappear.

But, plainly, it is but seldom that all these conditions of cerebral perceptivity are combined. Sundry observers, impressed by what they saw in exceptional cases, have supposed that they could at will develop lucid somnambules. They forgot that it is always in the state of sleep that dreams are commingled with true sensations. They confounded together magnetism and somnambulism, and so exposed both to the ridicule of men of sense.[1]

Mesmer does not hide from himself the fact that in spite of all the reserve one may exercise with regard to so delicate a subject it will be hard to convince those who have not themselves verified the phenomena. "Suppose," he says, "a people that of necessity must fall asleep at sundown, and that never awake till sunrise: such a people would have no conception of the magnificent spectacle of the night. Were one to tell them that there are among them men in whom this wonted ordering of sleep and waking is disarranged, and who, awaking in the night, have descried at infinite distances innumerable luminous bodies, new worlds, so to speak, one would doubtless be treated as a visionary because of the vast difference between the opinions held on the one side and on the other. Such to-day, in the estimation of the multitude, are those who maintain that in sleep man has the faculty of broadening his sensations" (p. 80).

"In the memoir I published in 1779," says Mesmer again, "I made known the reflections I had made many years previously upon the *universality of certain popular opinions*, which, as I believe, are the results of the most widespread and the most constant observation. Thereanent I said that I had undertaken the task of inquiring what of useful and true might be contained in old-time errors; and I felt warranted in asserting that among the vulgar opinions of all times [as imposition of hands, visions and oracles, influence of certain metals, mystic action of man on man, evil eye, power of taming animals, communication at a distance, presentiments and simultaneous sensations, influence of yearning and of prayer, transmission of health, strength, disease, etc.] there are few, however ridiculous, however extravagant they may seem, that may not be regarded as remnants of truths primitively recognized" (p. 3).

[1] "F. A. Mesmer," p. 79. By Dr. Kerner. Frankfort-on-Main, 1856.

And as certain of these processes, by a too scrupulous observance (p. 44), by a blind application (p. 44), seemed to recall ancient opinions, ancient practices that have justly been regarded as errors (p. 89), "most of the men devoted to science and the healing art have considered my doctrine only from this point of view: carried away by these first impressions, they have neglected to study it thoroughly. Others, actuated by personal motives, by professional interest [*interêt de corps*], have refused to see in me aught but an adversary that they must crush. To that end they employed first the so powerful weapon of ridicule, and the no less effective and more hateful one of calumny; at last they spread broadcast copies of a report[1] that is destined to stand for all time as a monument that will insure little of honorable fame to the men that dared to sign it. Other persons, convinced at last, whether by their own experience or by that of others, have become enthusiasts, and have indulged in such exaggerations as to render all the facts unworthy of belief. Hence have resulted, for the weak and uneducated multitude, illusions and groundless fears. Such hitherto have been the sources of public opinion adverse to my doctrine" (pp. 89, 90).

Hitherto! Yes, as late as 1886.

"I willingly submit my theory to criticism, declaring that I have neither the time nor the will to reply. I should not have anything to say to those who, incapable of crediting me with straightforwardness and disinterestedness, would think only of attacking me with purely hostile intent; and I should be pleased to see men of greater talent discover principles more solid, more luminous, men of larger mental endowment than myself develop new facts"—they have discovered new names—"and by their ideas and their researches render my discovery more interesting still. It will be enough for my fame that I have been able to open a vast field for science, and that I have in some measure traced the route of this new career" (p. 92).

Such were the opinions of the illustrious "charlatan."

We may take exception to several points of this hypothesis, and, indeed, I shall endeavor later to present the facts in a slightly different aspect; but it will be allowed, I think, on comparing Mesmer's ideas with those of his successors, that his is the only theory worthy of the name.

How far removed we are here from the crudities of the magnetizers with their fluid running hither and yon! which *goes around walls* and floats through the air to *hit* the predestined subject and to set itself up within his body! Heedless of their master's admonitions, they have hypostasized, substantized an *action*, creating a new metaphysical entity, whereas he wanted to free us from the ancient ones.

But how far removed we are also from the academic commonplaces

[1] 1784.

that attributed all the phenomena of magnetism to imagination, imitation, and jugglery! Fortunately, prejudices pass away, and experience remains. Undoubtedly we are beginning to go back to the fountain-head. Dr. Despine, Jr.,[1] published in 1880, that is 200 *years after Mesmer*, the following reflections:

"*Explanation of the phenomenon of thought-transmission.* Action from a distance upon the psychic phenomena of somnambules being no longer matter of doubt, let us try to explain it by means of natural agencies. Let us remark, in the first place, that the expression 'action at a distance' comes from the belief that there is vacuum in nature. Now, that is not so at all."

Before I proceed with the exposition of Mr. Despine's views, I will observe that though he is perfectly right in rejecting action at a distance in the absolute sense of the term, that is, across a vacuum, he goes a little too far in affirming the non-existence of a vacuum. That was Mesmer's error, for he, too, regarded the universe as absolutely *full*. That supposition is incompatible with the idea of motion such as is necessary for explaining any transmission whatever. One can, indeed, conceive the motion of a sphere turning on its axis *without displacement;* but when there is question of transmitting any motion, we must postulate a free space, a *shock* communicated through this free space, consequently a vacuum. To assume a medium more and more elastic, and which, because of this elasticity, opposes no obstacle, will not serve; for when you assume a matter to the last degree subtile, you still must ascribe to it *particles* separated from one another by empty spaces. Either a vacuum exists or there is no motion. Motion being change of place, there must be a place in order that place may be changed. From this there is no escape. Whether it is thus with "the thing in itself" of Kant, I know not; but what I do know is, that one puts himself under an illusion if he thinks he can comprehend motion without a vacuum; a motionless movement, if I may be allowed the expression, there may be—but that does not help; a transmission of motion, no.

But that is a question that is independent of the mystic action at a distance. Vacuum may exist, and action at a distance across vacuum may not exist.

Mathematicians have often puzzled their brains calculating the actions and re-actions that must take place between two material points separated by vacant space. It is labor lost. Between two material points separated by vacant space there is neither action nor re-action. Universal attraction as an occult property of bodies is a senseless idea, infinitely more difficult to comprehend than the transmission of thought. It is not I who say this: it is Newton. The

[1] Dr. P. Despine, fils, "Etude Scientifique sur le Somnambulisme," pp. 222–229. Paris, 1880.

theory of Newton has been brutalized, idiotized, as that of Mesmer has been, by men who could not understand the necessity of subtile ideas for subtile causes. Newton himself—and here Mr. Despine is perfectly right in quoting him—rejected action at a distance: "That brute matter (or matter of any sort) should, without the intermediary of any other thing that is not material, be able to act, to operate upon other matter without mutual contact, is incomprehensible. That gravitation should be inherent, essential to matter, so that a body may act upon another body at a distance in space, without the intermediary of something whereby their activity"—in other words, their motion—" may be transmitted from the one to the other, seems to me so great an absurdity, that no man, I believe, who is competent to think of philosophic matters, can ever fall into it."[1]

And yet that is the opinion of the majority of scientific men nowadays. But let us go back to Despine's analysis:

"The researches of modern physicists confirm Newton's view in so far as they prove that there is no vacuum [again the same confusion]; that space is full of a matter that is eminently subtile, called ether, whose attributes are not only transmission of electricity, and transmission of terrestrial magnetism, but also transmission of light and heat. [A matter eminently subtile means a matter eminently rarefied, and if a thing is rarefied that means that there is vacuum between its particles.] The vast interstellar spaces then are not regions of vacuum and of isolation. We find them filled with this medium which extends everywhere, so that when a molecule of hydrogen vibrates in Sirius, the medium receives therefrom an impression; but so great is the distance of that star that this impulsion takes three years to reach the earth. And yet that distance *in no wise alters* the vibrations transmitted." [That is another question. No one has been in Sirius to compare them.]

Mr. Despine then quotes from Herbert Spencer a passage of which I will repeat a part:

"The discovery that matter, apparently so simple, is, in its inmost structure, astoundingly complex; and that other, that its molecules, oscillating with almost infinite rapidity, propagate their impulsion to the surrounding ether, which transmits them to inconceivable distances in times infinitely small, lead us to this still more wonderful discovery, that *molecules of each kind are affected in a special way by molecules of the same kind that exist in the remotest regions of space.*"[2] That is Mesmer's idea.

[1] Our author does not locate the passage in Newton's works, and the above is but a version of the French version.—*Translator.*

[2] Diligent search has failed to discover the original of this passage in H. Spencer's "First Principles;" the translator must therefore content himself with a version of the French translation of it.

Mr. Despine quotes also Mr. Bertrand, of the French Academy, with regard to the existence of ether and its action upon the phenomena of light, electricity, etc. Then he adds:

"Why should it not be of equal importance in organic nature? May we not reasonably suppose that that which in this universal medium is the principle of light, electricity and heat, may also, when united with nerve-matter, be the principle of life in animals possessing a nervous system, and consequently the principle of activity of that system and of its various functions? When we reflect that this system is not absolutely necessary to life, inasmuch as plants and the lowest animals are without it; when we reflect that light, heat and electricity, that is, the principal manifestations of the ether, are necessary to life, seeing that wherever they are insufficient vegetal life and animal life are impossible, and that life is all the more active the more potent these manifestations are; when we reflect upon all this, have we not a right to conclude that the principle of life in organized bodies really consists in these three manifestations of the ether, and that the nervous system is needed only to regulate [*présider à*] the specialty of each function as the ether puts the same in action? This hypothesis seems to us so reasonable that we take the liberty of submitting it for the judgment of the learned."[1]

I do not well see, I confess, the advantage of this transfer to the ether of the *principle* of nervic and of general organic activity; I do not think it is made thereby more comprehensible. So many things are saddled upon that long-suffering intermediary! Mr. Despine attributes to the ether light, heat, electricity, terrestrial magnetism, gravitation, molecular attraction, chemical affinity, the functions of organic life and those of automatism, finally, the functions of the brain. There remains little, I think, to dispose of. Yes, there is Providence; but that has been attended to. Spiller[2] attributes to the ether not only all these things, but Godhead too. "The Ether is God," says Spiller. I see no difficulty in going so far, but why halt there? Let us call light the Son and electricity the Holy Ghost, and everything will be explained. The only thing to be accounted for then will be *how* the Ether formed organisms and watches over the human race.

Let us return to mental suggestion.

"From these data," continues Mr. Despine, "we see how brain activity, which governs psychic manifestations, may, under certain conditions of impressionableness [what are they? a theory of transmission ought to define them], be echoed in an effective way in the brain of another individual *by means of the ether*, may therein determine an activity of the same kind, and therein call out similar

[1] "Etude Scientifique sur le Somnambulisme," p. 285.

[2] "Gott im Lichte der Naturwissenschaften."

instinctive elements, thoughts, mental representations and volitions. Every psychic act, unquestionably, has for cause a cerebral modification of vibrations, a special mode of activity in the gray-matter cells of the brain. True, these vibrations are not capable of impressing, by the intermediation of the ether, similar vibrations on neighboring *sound* [?] brains. Yet, however faint these vibrations, they nevertheless are propagated outwards, though they hit [*frappent*] those brains without effect. But suppose that among these brains there is one that is in such a state of impressionableness as to be influenced by the ether-vibrations produced by the activity of a sound brain, and suppose that these vibrations produce in this impressionable brain identical vibrations, then the activity of this organ will certainly give rise to similar thoughts. Thus is explained naturally thought-transmission and transmission of will from one individual to another, without external signs. If this action is rare, that is not because of the mode of action of the ether fluid nor of the laws governing that mode of action—two things that do not change; it is because of the *special state* in which the nervous system may be influenced by this faint action—a state consisting particularly in an *extreme sensibility* of that system, and which is abnormal, pathological [?], and, fortunately, rare. The action of the agent is always the same; the thing that varies and that makes the phenomenon rare is the state of the nerve-organs that receive the action of the agent."

True, but rather vague.

"By this cause of transmission from a distance—a transmission that is undoubted, and which has to be held in reserve simply because it has not yet found popular acceptance—is explained not only the transmission of thought in somnambules, but also the fact that persons whose nervic constitution is vigorous, whose cerebral activity is energetic, and whose will is strong, are better magnetizers than persons of feeble constitution. So, too, we explain nervic contagion, which Bouchut[1] believed to be a fact—a contagion that under certain

[1] Here is a significant passage from this eminent observer: "One might say that in certain cases, notably with regard to convulsive neuroses, there exists a *direct physical action* of the patient upon the man in health, by a nervic emanation the influence of which produces at a distance the convulsive state, for it is difficult always to explain the fact by imitation, as imitation is commonly understood. However that may be, contrariwise to what we see in other modes of contagion which we think we understand, attributing them to miasmata, cholera for example, we know nothing of the cause of epidemic neuroses, as chorea or hysteria; we know no more about their contagional principle, if so be that there is one, than we do about the vehicle in which it is conveyed. It is easy to frame hypotheses about it, but impossible to demonstrate the nature of the contagion principle. . . . The action of this nervic contagion is exceedingly powerful and almost without bounds. It acts upon men and upon animals, at every period of life, but particularly in youth, and its influence is greater on woman than on man. It shares at once the properties of contagion, in that there

conditions propagates afar the phenomena somatic and psychic that characterize the different epidemic insanities; so we explain moral contagion, as also the ascendant that strong minds exercise over weak." [But if they "hit without effect" sound brains, how can the vibrations of the ether transmit all this?] "So we explain why the processes of magnetization—passes made whether in contact or at a distance—are able to produce the different phenomena called magnetic. So we explain why it is that the organs that have been rendered highly impressionable by disease, and the organs best supplied with ganglia and nerves, as the head, epigastrium, neck, arms, finger-tips, are the parts most readily impressed by passes" [but then it is the number of nerve fibers that explains all this, not the ether theory]. "Finally, so we explain the very remarkable action of certain individuals' will upon other individuals, without any outward sign—an effect that we see exhibited very strikingly in the case of Castellan, condemned at the assizes of Draguignan" (227).

A little farther on the author gives as the cause of this special impressionableness of mentally-suggestionable subjects, "neuropathic and hysteric affections and anæmia."

It is usual for hypnotizers to confound these conditions with hypnotic sensibility, which is a primordial character independent of all disease. A person may be eminently sensitive and yet entirely healthy. Only it is easier for a hypnotizable person to become hysterical than for another person; or at least in the case of the former the hysteria assumes the convulsional character of the major hysteria. Neuropathics generally have no greater sensibility than healthy persons. Among the patients under the care of Dr. Aug. Voisin at the Salpêtrière, Paris, we found but 28 per cent. sensitive: among persons in health the proportion is 30 per cent. As for anæmia (another error propagated by Prof. Heidenhain!) it is rather an unfavorable condition: at all events, an anæmic *brain* is not necessarily more impressionable than an hyperæmic one; I am inclined to hold that it is less.

Mr. Despine closes with the following reflection: "If neither nervic fluid nor magnetic fluid intervenes in the phenomena of animal

is apparently a contagional agent, and of imitation by reason of its moral and mental character." (Bouchut, "De la Contagion Nerveuse," etc., p. 14. 1862.)

I quote the above passage from J. Rambossom's "Phénomènes Nerveux, Intellectuels, et Moraux, leur Transmission par Contagion," pp. 200, 201. Paris, 1883. This author does not speak of mental suggestion, but he formulates a law of the transmission of expressive motion (*mouvement expressif*) in the following terms: "A cerebral or psychic motion may, in traversing different media, became purely physiological, then physical, once more physiological, and finally cerebral or psychic, without changing its nature, *i. e*, while still retaining the power of reproducing all the phenomena that are appurtenant to it" (p. 187). This law may be regarded as the generalized formula of psycho-physical theories. See the next chapter.

magnetism so-called, as the old theory had it, the universal fluid does positively intervene, if not as the direct cause of the phenomena, then at least as the agent for transmitting the mode of activity of one person's nervous system to the nervous system of another person."

In short, between the theory of Mr. Despine and that of Mesmer, which he knows not, there are only a few differences of detail, to the advantage of the latter if I am not mistaken.

Mesmer held, like Spencer, that the particles of a given matter are affected principally by particles having like motions, and, guided by this thought, he conceived a series of motions of progressive subtility, and a series of states of matter of progressive rarefaction—solid, liquid, gaseous, etheric, more subtile still, the state of the universal fluid or primordial matter, and that too, presents degrees, but to us they are unknown. In short, he made a division of Nature's work, and distinguished the universal fluid, which he regarded as the medium of life-vibrations, from the ether, to which he assigned mainly the light-vibrations. In sooth we know nothing about this whole organization, but as the matter is entirely under our own control, we can allow ourselves the luxury of several series; that is at least fairer than to lay the whole burden upon the back of one fluid. Then, I believe that there are in nature no absolute limits, and I prefer Mesmer's graduation to the fluid, doubtless imponderable, of Mr. Despine, that is to say, of the majority of modern physicists. That fluid, which is but an absolute negation of "ponderable" matter, constitutes a species of matter absolutely the reverse of everything we know of ordinary matter, and, let us say it frankly, inconsistent with common sense. The particles of ordinary matter attract one another, those of the ether repel, and so on. It is a tissue of phantasy. The ether is an *imponderable* fluid. But if "fluid" means anything, then "imponderable fluid" is nonsense. A fluid, that is, something that can flow, must be *impelled* by something, and consequently must *weigh* upon something. Again, the molecules of the ether, we are told, are attracted by ordinary matter, and when one body is attracted by another body, it *weighs* upon it. Then, the ether cannot fill *all* space, precisely because it is *rarefied*. Finally, if this is to explain for us attraction and ponderability, it cannot itself be either ponderable or imponderable, since it is only by a relation between it and ordinary matter that these qualities are manifested.

In a word, I understand the necessity of a *gas* more rarefied than the gases we now know, *i. e.*, more rarefied than hydrogen (there are perhaps many such, for all I know); but I do not understand a matter that is not matter, a rarefied body that does away with vacuum, a *deus ex machina* explaining everything, himself incomprehensible. I prefer my ignorance to such science. And I beg the mathe-

maticians not to imagine that they can discover anything outside of the relations founded on experience. A psychologist can understand this. He can value as highly as you please the four, five, or *n* dimensions shown him by means of abstract symbols, but he confesses frankly that *three* dimensions he can indeed imagine for himself, but no more. Were Zöllner still alive, he, no doubt, would explain thought-transmission by saying that it takes place across the fourth dimension, and we should have one theory additional.

In the lack of that, it only remains that we mention one theory more, and that simply in order to make a transition from the foregoing hypothesis to our own. This transition we find in Puységur's theory.

CHAPTER VI.

THE HYPOTHESIS OF A PSYCHO-PHYSICAL TRANSMISSION.

THE sympathetic wizard (*sorcier*) of Busancy, who was so deeply interested in mental suggestion, is worthy of mention here. He was a soldier,[1] and disposed to cut the knot of a problem. The series of Mesmer's universal fluid had some difficulty in effecting a lodgment in Puységur's cranium, but he was a marquis all too courteous to bear a grudge against his master on that score. Rather does he charge himself with incapacity for metaphysics, and confess that, after having for two months attended Dr. Mesmer's theoretic course, he knew about as much of magnetism as before (p. 30). But theory mattered little to him. "Increase the number of experiments," says he, "and you will come upon a theory; else you will lose your time. Had we been obliged, in order to recognize the well-known phenomena of electricity, of the magnet, and of galvanism, to wait till we should agree as to their causes, there is reason to believe that we should to-day have neither lightning-rods, nor compass, nor Voltaic pile. Is there an electric fluid, a magnetic fluid, a galvanic fluid?" (p. 26.) He does not know whether there is or not; but what he does know is, that in order to act upon Victor or Magdeleine he did not need to have any knowledge of poles, or even to believe in the existence of a fluid. "So I took care to choose rather a certitude gained through

[1] Puységur was *maréchal de camp* of the royal artillery corps. The quotations that follow are from the work published in 1807, entitled "Du Magnétisme Animal Considéré dans ses Rapports avec diverses Branches de la Physique Générale."

experience than the hypothetic probability of a magnetic fluid, the existence of which no physicist has ever been able to verify" (p. 35).

Then he passes in review the phenomena of heat, of fire, of the electric machine, of light, of the Voltaic pile and of galvanism, of the magnet, and of the *sorciers*,[1] and by a series of comparisons and reflections of the utmost lucidity, comes to the conclusion—quite opposed to the dominant ideas of his time—that heat is but the *effect, perceptible to the senses, of the transmission of a motion* (p. 37); and that, consequently, "caloric has no existence" (p. 38); that the cause of the magnetic properties of the loadstone results solely from a "tonic inner motion (*mouvement tonique et intestin*) in the iron, *of a kind much like that recognized as existing* in the Voltaic pile" (p. 71). Ampère's theory! Finally, that it is all "transmission of motion."

Puységur is incomparable in his deductions from an experiment in thought transference compared to an experiment with an electrostatic machine. He poses two problems: To light at a distance a bit of amadou by the aid of the electric spark; and to act mentally from a distance upon his brother, who is at Versailles. "I performed an action, that of turning the crank of the machine, I not stirring from where I stood; the action of necessity had its indispensable result, which is, to communicate motion; from this I concluded that no bit of amadou in the world can be set on fire save by *the transmission of a communicated motion*" (p. 46). "My brother is four leagues away, at Versailles. Let us see how I may transmit motion to him. Nothing can be simpler. I recall his image and I think of him. 'Mysticism and witchcraft?' By no means: it is the sanest kind of physics. Is not every human act preceded by the volition to execute it? Is not the volition itself preceded by the thought that it can be carried out? That thought then is the motor; hence it is as regards me what the glass plate is as regards the electric machine. 'And you think you can produce some effect upon your brother by the action of your mind?' Certainly not. He would in that case be less sensible of the action of my mind than you, not being insulated, would be of the action of the revolving plate of an electric machine" (p. 53).

So, then, one must be "insulated" in order to feel a transmission of motion otherwise imperceptible. Imagine a series of ivory balls suspended by threads and contiguous to one another. If I hit the first, the last that very instant leaps out. If I strike the end of a bar of steel with a hammer, it becomes magnetized. The particles cannot leap out, nevertheless they are put in motion; this "inner motion" (*mouvement intestin*) is accelerated and regulated in some unknown way, and lo! the bar is *magnetized*. In like manner, by producing an

[1] Probably practicers of "Bletonism," named from Bleton, a Frenchman, who claimed to possess the faculty of perceiving subterranean waters by sensation.—*Translator*.

inward shock of my will (*en effectuant un choc intérieur de ma volonté*), I transmit motion that may be reverberated by a being at a distance (pp. 33, 52).

This, it is seen, is Mesmer's theory simplified and popularized, *minus* the universal fluid, which Puységur cares little about, and *minus* the remarkable precision of the founder of magnetism.

This theory was lately propounded by Dr. Perronet under the name of *undulationism*. He formulates it very briefly, thus:

"Suggestion is a phenomenon whereby an individual transmits to one or to many other individuals his own thoughts, whether conscious or unconscious, by materializing them in the forms of the objects represented by them, and passing through this series of intermediate phenomena:

"1. Nerve-undulations of central origin and centrifugal in direction, which undulations are produced by an unknown mechanism in the organs that serve as a ground for his psychic faculties;

"2. Undulations at the periphery of his body, fibrillary contractions or other kinetic phenomena that are usually unconscious;

"3. Undulations produced in the cosmic medium by the foregoing motions;

"4. Shock to the nerve-extremities of the recipient individuals from these cosmic undulations, which produce in the psychic centers of those recipients the final undulatory phenomenon, translated by the real perception of the object signified by the thought."[1]

And now let us put all these theories aside and attend only to the facts. I will endeavor to make them intelligible as far as may be in the present stage of our researches. And you, gentle reader, keep an eye upon me, lest I broach some absurdity—a thing quite possible in so perplexed a question, and that happens oft to those who do not spare others.

[1] Claude Perronet, "Du Magnétisme Animal," pp. 60, 61. 1884.

CHAPTER VII.

THE ELEMENTS OF A SCIENTIFIC EXPLANATION.

BE it observed at the outset :

1. That the suggestion called mental is a highly complex phenomenon, which for that reason cannot be explained by one simple principle ;

2. That even with regard to a determinate and isolated fact, the theory must necessarily be bifarious : psychological and physical ;

3. That in all phenomena of this sort we must consider, on the one hand, the conditions pertaining to the operator, on the other the conditions pertaining to the subject.

This stated, let us have an understanding as to the general purport of a scientific explanation.

Explaining means nothing else but *reducing the unknown to the known ;* and there is but one way of doing that, to wit, by pointing out *the conditions on which the phenomenon appears, and without which it cannot appear.* That is all that one can do ; it is also all that is required. We must not suffer ourselves to be under the illusion that adequate knowledge is attainable of anything. We ascertain the conditions of phenomena, we state these as well as may be in *laws* that are simply a generalization of our observations : that is all. That is the whole of science.

If we would define the conditions of a phenomenon, we must first *describe* it, *analyze* it, so as to circumscribe its contents and assign it a suitable place among other phenomena. This we have endeavored to do by treating separately the different kinds of psycho-physical transmission. It follows that mental suggestion proper must be studied in connection with sundry phenomena of physical transmission, which, by approaching it step by step, elucidate it. Furthermore, as we have seen, very many phenomena that have been attributed to physical or mental transmission, are only facts of apparent transmission.

This *apparent transmission* may, according to the nature of the case, be explained :

1. By a pre-established harmony between two associational mechanisms mutually independent, but depending upon a *psychic medium ;*

2. By a presumption[1] based on the ordinary sensations of sight, hearing, smell, and touch.

These sensations, which betray our organic or our psychic state, can be perceived or even realized by the subject in proportion to :

[1] On the part of the subject. From the sense-impressions received by him in any way from the magnetizer or the bystanders, he infers the purport of the intended mental suggestion. — *Translator.*

1. His *unconscious experience*, a faculty belonging to us all, and which tells especially when conscious reflection is in abeyance;

2. His *ideorganic associations;* these may reveal the signification of influences more or less unnoticed in the normal state;

3. His *ideoplasty*, which realizes the thought suggested by unconscious experience and by ideorganic associations;

4. His hypnotic and magnetic training, which facilitates the cooperation of all the foregoing agencies.

It follows that apparent transmission will be favored:

1. By exaltation of the senses;

2. By exaltation of the intelligence;

3. By isolation of the senses and the intelligence, which allows the whole power of attention to be concentrated in one chosen direction.

But this whole theory falls short when we have to explain the phenomena wherein the involuntary tokens furnished by the principle of the *expressional exterioration* of every state, psychic or organic, no longer come into play. Unless we are ready to extend sensorial perceptivity beyond all reasonable bounds, and to make it as incomprehensible as the phenomenon of transmission itself, we must have recourse to another principle, which shall explain for us, not apparent transmission, but true transmission.

True transmission means that the state *a* of brain A is reproduced by brain B, without the intermediation of signs, whether visual, auditive, olfactive, or tactual.

Of course in practice these two kinds of transmission must commonly be confounded, and only in experiments made expressly for the purpose and at a certain distance can we be sure that true transmission alone is in play.

Though thought is purely a phenomenon of the brain, in the sense that it cannot be produced by any other organ, still it is never restricted to the brain alone as regards the manifestations that accompany it. *There is no thought without expression;* we might even say with Sietshenof that there is no thought without muscular contraction; but I prefer the first formula, which is the more general one, inasmuch as it includes also the secretions, the emanations, the direct production of heat and electricity. One may stand absolutely motionless and think of all manner of things, yet on analyzing our attitude attentively we find:

1. That if we are reflecting with any degree of intensity, there is always an inchoation of speech; the larynx, the tongue, even the maxilla executes slight movements;[1]

2. That if our thinking presents a visual rather than an auditive character, then the eye, though shut, follows the movements of the

[1] I called attention to this fact in my work on Method, "Méthode des Recherches Psychologiques," 1869.

imaginary objects and the pupil is dilated or contracted according to the brightness or the remoteness of those objects;

3. That the respiration is governed, accelerated or slowed, according to the course of our thoughts;[1]

4. That in the muscles of the members there is always an internal contraction answering to the unexecuted movements we think about, or appropriate to the sense-images in our mind;

5. That all emotive states are accompanied by a corresponding change in the circulation;

6. That a concentration of the will is reflected in a corresponding contraction of the diaphragm;

7. That all these phenomena must determine a modification in the functions of the vegetative life, in the exchange of matter, and consequently in the production of the various secretions and emanations;

8. That all psychic work determines a production of heat, and that probably there is a direct transformation of psychic work into radiant heat.

The effect of these actions cannot be restricted to the surface of our body, and, consequently, even at a certain distance, these changes may imperceptibly influence the senses of some other organism and make themselves felt, more or less distinctly, by an exceptionally impressionable organism.

By having regard to but one class of sensations one may reach partial, incomplete explanations. One might, for instance, say:

1. That the subject reads the operator's thought in the visual pathognomic signs, and that therefore the theory of mental suggestion resolves itself into a theory of an exalted visual sense;

2. That as thought is habitually expressed in speech, and as the subject may present an extraordinary hyperacusia (be it said in parenthesis that this hyperacusia never extends more than some yards' distance for words *really* pronounced), we may regard mental suggestion as *an exalted audition* of the inward speech and of the respiration-sounds;

3. That inasmuch as it has been proved that emotions are accompanied by a modification of the cutaneous odor, we may magnify the value of these indicia and hold that every thought that is in any degree concentrated and persistent, especially the thought of approval or of negation (and perception of these two thoughts may greatly assist a subject who seeks to execute an order given him), that each such thought is characterized by a perceptible olfactive modification;

4. That the heat given out because of a mental effort, as modified by the approach of the operator's body and by his gestures (air-

[1] See my work "Bedingungen des Bewusstwerdens." Leipsic, 1874.

currents), may guide the subject, may, in particular, enable him to perceive the inception and the direction of the action, and may thus account, upon grounds purely of caloric action, for influences said to be mental;

5. That in experiments with direct contact all the expressive vibrations and tensions of the muscles may serve as unmistakable pointers to an interpretation of our thoughts: this would be a *mechanical* theory of suggestion;

6. That as the phenomenon of reflex *attraction*, based on an exalted cutaneous sensibility, can be developed very highly so that the subject shall be attracted by gestures that are hardly made at all, one might adopt a purely *attractional* theory of suggestion, and say that all the movements mentally ordered are executed because of a *reflex physical attraction;*

7. That the phenomenon of the *imitation* of movements being a common one and capable of being largely developed, we may suppose that if, even with the eyes closed, the subject can repeat the movements of the operator, the same phenomenon, in a slightly higher degree, might be presented with regard even to incomplete movements; that would be a purely *imitational* theory.

All these considerations taken separately, or even taken together, can apply only to a certain number of facts; but we have to bear them in mind wherever, according to the case emergent, any one or more of the principles stated can fairly be appealed to.

A few controlled experiments alone can decide whether or not they apply in any given case.

In general, as regards experiments made from anear, it appears certain that there is a graduation of the facility with which they may be performed. The scale is about as follows:

1. Experiments made with contact, gestures, and looks;
2. Experiments made with gestures and looks;
3. Experiments made without gestures, with looks;
4. Experiments made without contact, gestures, or looks.

Starting from this last degree, the influence, up to an unknown limit, no longer decreases with the distance. If action can be exerted from the farther end of a room *unbeknown to the subject*, it can be exerted equally well from another room, from another house, and so forth.

The fact that a small distance often makes a noticeable difference, and that a great distance makes no perceptible difference, proves:

1. That *in certain cases* contact, gestures, and looks have their share in the action;

2. That neither this action of theirs nor the action of olfactive sensations suffices to explain certain other cases.

Furthermore, contact is very often indifferent, gestures useless, and looks exert no distinct action; therefore, if these agents have any

action at a distance, it must be a subjective one: to wit, it simply helps the operator to concentrate his thought.

On the side of the operator the conditions have been very little studied. But it is probable:

1. That there are personal differences;

2. That these differences may be due not only to the degree of thought-intensity, but also to the nature of the thought itself, according as it is visual, or auditive, or motorial;

3. That some account has to be taken of a sort of accord, of concordance between the natures of the two intelligences;

4. That excessive will-effort impairs the definiteness of the transmission, without much enhancing its intensity;

5. That strong, persistent, prolonged thinking, or a thought repeated for a longer or shorter time, constitutes a condition in the highest degree favorable;

6. That any distraction that causes the thought to disappear for a moment, or that makes it cease to be isolated, seems eminently unfavorable to the mental action;

7. That, nevertheless, thoughts that are not intense, and even thoughts that are at the moment unconscious, may be transmitted involuntarily;

8. That the muscular efforts that always accompany an exertion of will are more or less indifferent; but that the muscle-expression of the operator may be useful, subjectively, by reason of the habitude that connects thought with these expressional signs.

It follows from these considerations that the operator should insist less upon the "I will it" than upon the content of that willing; and hence it is probable that, properly speaking, it is not the strong will that helps suggestion so much as the clear thinking.

As regards the subject, to find the bearings in this question we may consider one after another the four principal states:

1. In the state of *profound aideia*, transmission is never immediate, but it may sometimes be *latent;*

2. In the state of *nascent monoideism*, it may be immediate and perfect;

3. In the state of *passive polyideism*, it may be either mediate[1] or immediate, but always weaker;

4. In the state of *active polyideism*, the conditions are complex, and they must be considered separately:

a. Transmission may be direct if the subject helps by voluntary self-absorption in a concentration of mind more or less monoideic:

[1] Mediate—with a lapse of time intervening between the mental action and the action of the subject.—*Translator.*

he lends himself to the action, he listens mentally, he seeks, sometimes he finds.

b. It may be indirect, that is, latent, this time also with some concurrence on the part of the subject ; this case seems more frequent.

c. Finally, it may, in exceptional instances, be either mediate or immediate, even without the subject's being advised beforehand of the action. Here we touch the question of mental action upon a subject in the waking state, and that calls for some explanations. The somnambulic state of active polyideia differs from the waking state only by two characters, of which one is absolute, the other relative :

1. The absolute, *i. e.*, the constant, necessary difference is quantitative only: waking is a state *more* polyideic than somnambulism. In the latter there is always a narrowing of the psychic field. In the waking state, despite the apparent monoideism which has deceived many psychologists (Bain, Wundt, Morell, Horwicz, *et al.*), our thought is always very complex ; we have simultaneously a multitude of contending sensations, and a multitude of recollections that are ever striving to free themselves from the pressure of the dominant ideas (Herbart). In somnambulism their number is much smaller ; most of the usual sensations are wanting (anæsthesia) ; most of our recollections are paralyzed ; but what may lead one astray, and what (despite the general narrowing of the psychic field) constitutes a peculiar character of this state is, that the sensations and recollections *belonging to a given idea* may be more numerous in somnambulism than in the waking state ; the perception is more detailed, though only with regard to one idea, and the associational reproduction more complete, though always strictly in one direction. Hence it follows that the somnambulic state of polyideia is more favorable to mental suggestion, *if the subject is fore-advised of the action ;* but if he is not, then the waking state will have the preference. It is easier to influence unbeknownst a waking subject than one clearly in the state of active somnambulism. In the latter case the subject is *more absorbed* and hence *less accessible.* The normal state is in general less sensitive because of the resistance of a multitude of thoughts that are struggling for life, but it is less concentrated, more *elastic*, more diversified, and hence more accessible. What I meant to express when I said " more elastic," is, that in the normal state our thoughts launch out more freely right and left, without losing the clue that guides them ; but I used the term chiefly because of this peculiarity—one that is of interest for us on other accounts—that in fact the normal state is not a state out and out polyideic ; it is rather a fluctuating (*mobile*) aggregate of all possible states, with preponderance of polyideia. There are unquestionably moments of monoideism in its every grade, and even intervals strictly monoideic. Only, all these phases are commingled, following one another with inconceivable rapidity. But

that is what makes this state amenable to faint influences, particularly in hypnotizable subjects, whose minds are generally characterized by a constant tendency to monoideism.

2. The second difference between the somnambulic state and the normal is only a relative one, but it is of still greater importance for the matter in hand. It is a relative one in that it does not exist in the *hypnotized:* a *hypnotized* subject is not *in rapport* with any one. It is relative also from another point of view, in that, though in magnetic somnambulism there is *isolation* of the subject, the isolation differs only in degree from that of a normal state in which suggestion can succeed. In fact it never does succeed—at least immediate suggestion does not—in a normal state in which there is *no trace of rapport.* This rapport must be established, either by repeated magnetizations, by a tie of blood, of sympathy, of daily association, or by some exceptional influence of the moment.

This detail brings us to the very heart of the subject. Rapport being a *conditio sine qua non* of distinct mind action, let us strive to define what it is.

As we have already observed in the opening of this study, and then in remarking upon Despine's experiments, the nature of this phenomenon is essentially two-fold—psychic and physical. We already know the psychic elements, which are the predominant ones in regard of the frequency of their plain manifestation, but we have now to analyze the *physical cause* of the phenomena of rapport.

"There's the rub!" Are we justified in asserting that "animal magnetism" has a physical cause?

Observe in passing that, considering the general aspect of the phenomena hitherto lumped together under the one denomination of "hypnotic" phenomena, this cause is not necessary save for certain classes of facts; the rest can do without it. But that does not remove the difficulty: it remains, though in shadow. And what shocks the "regulars" is, that this physical action "upsets every notion of physiology."

"I never could understand," says Mr. Brown-Séquard, "how an intelligent man, acquainted with the ground principles of physiology, can believe in such transmission (a transmission of nerve-force from one individual to another), seeing that the student who has learned ever so little knows how vain, after a motor nerve has been severed, is the effort, the wish, the will to move the paralyzed part"[1]

I should not like to pass for the most uninstructed student, still less should I care to set up as teacher of my honored master, to whom I am indebted for more than one excellent idea, but—*amicus Plato, magis amica veritas*—I venture to say that even I see how the paralyzed part might be moved.

[1] Preface to Simon's French translation of Braid's "Neurypnology."

The will, says Mr. Brown-Séquard, cannot reach a muscle the motor nerve of which is severed, whereas it seems to him quite natural that it should be able to reach a muscle whose motor nerve is not severed. Now to me that does not seem natural at all. I agree that it cannot reach a muscle whose motor nerve is severed, but at the same time I do not believe that it can reach a muscle whose motor nerve remains intact. The will is a cerebral phenomenon, that never has been found (*constaté*) outside of the brain, and that cannot outstep the brain. It is not even transmitted to the motor nerve that issues from the brain and terminates in a muscle. So, too, the mechanical motion of a muscle is not transmitted to the sensor nerve to reach the brain, but it may, it necessarily must, give rise to a molecular current; that current is transmitted to the brain, and therein calls out another dynamic phenomenon the nature of which is unknown, but which we distinguish quite clearly as *sensation* or *idea*. It is the same with the will. To reach a muscle, the will absolutely requires a molecular intermediary which shall traverse the nerve, and it is entirely true that this intermediary cannot leap over where the nerve is cut in two. Neither can a telephonic current, though less capricious, overleap a break in a wire: the telephone will be dumb. And were we to stand still at this experiment we should be fully justified in saying of the telephone what Mr. Brown-Séquard says of the muscle.

Fortunately, our science does not stand still there. Mr. Brown-Séquard, in proclaiming two indisputable truths, makes two mistakes. The two truths are these:

1. Nerve-force cannot traverse a severed nerve;
2. *Nerve*-force cannot *pass* into another nervous system.

Very true; nor do I believe in any passage of any nerve-fluid.

But does that mean that nerve-force, or any force whatsoever, acts only where it is, and that its action is absolutely restricted within the body in which it manifests itself visibly?

Here the error begins. It is twofold, for—

1. Such force, thus absolutely limited to any material point whatever, does not exist;
2. If it did exist, the most fundamental principles of physiology, among them Mr. Brown-Séquard's principles of inhibition and of dynamogeny, would be upset.

The normal action of a telephone ceases when the wire is broken. It is equally null for us when, though the wire is not broken, the circuit contains only one telephone. Is it possible to transmit speech with one telephone? No; and yet the telephone works. The whole length of the wire is traversed by a current which is not speech itself, but which is its correlative, though it is dumb.

Take another telephone having also a closed circuit, and, like the first, dumb. Bring it near the other, or only near the wire of the

first telephone, or even simply bring the wire of the first near the wire of the second, and *the latter will talk*, will reproduce speech, though there is no material contact between the two. It will talk by *induction.* It is this transmission, not that which takes place between muscle and brain, that corresponds to mental transmission. *My brain does not act upon the muscles of the subject, but it may act upon his brain.* If instead of a second telephone we were to place alongside of the first telephone a different sort of instrument, an electroscope, for example, there would be no result; but we must not by any means infer that therefore there is no electric action all around the telephone, for in order to get a specific action we must employ a specific instrument, a telephone for a telephone, a brain for a brain.

I do not at all mean to strain the analogy; comparison is not proof; and were there not other evidences of inductive physical action this would be of no avail. But the case is not so. Apart from all theory, facts compel us to admit a physical action: we should have to admit it even were there no other analogous phenomenon.

Here are the facts in brief. Of course I cannot here prove their reality, but shall merely mention them, believe them who will:

1. Sometimes the magnetized subject discerns the presence of his magnetizer independently of the ordinary sensations. His touch he distinguishes from that of others—distinguishes it even though it be applied by means of an inert body (a rod, for instance), which of itself cannot influence him differently. If, therefore, the subject distinguishes his magnetizer's touch as well through a rod as directly, it must be that there exists a molecular current of some sort peculiar to the organism of the magnetizer, and which indicates his presence in much the same way that a galvanic current, through the intermediation of a wire in contact with us, indicates the presence of a pile. The objection that most subjects feel nothing of this action is of no weight, for so, too, with a current from a weak galvanic element we shall feel nothing, while the magnetic needle will clearly prove its presence, and with a current weaker still, from a telephone or from a frog, the magnetic needle will show no result whatever: an exceptionally sensitive galvanometer would be necessary in such a case. Suppose that 40 years ago, when Mr. Du Bois-Reymond published his discoveries in electricity, some one had challenged his assertions, saying that no galvanometer had shown the presence of the currents he declared to exist: the assertion would have been true, but nevertheless unjust, for at that time Du Bois-Reymond *alone* possessed a *multiplier* capable of showing their presence.

2. We can obtain marked results of a therapeutic kind by acting without contact and unbeknown to the patients operated upon, sleeping children, for example. Hence, there is an inductive action that overpasses the superficies of the body.

3. We find marked differences in the so-called magnetic action of different persons—differences not to be explained by moral action. One hand acts differently from another hand. Hence, there is a physical action, and a *personal* physical action.

4. Finally, inasmuch as facts compel us to accept action from afar, we must needs admit real[1] action from anear.

Though we cannot define with precision the nature of this action, we can nevertheless affirm that:

1. Every living being is a dynamic focus;

2. A dynamic focus tends ever to propagate the motion that is proper to it;

3. Propagated motion becomes transformed according to the medium it traverses.

Let us enter a little into details.

Whether forces, as such, exist in nature, I know not; *a fortiori* I do not know whether they exist outside of nature; what I do know is, that so far as it is knowable, force is nothing but motion. We say "motion," when we see motion; we say "force," when the motion is invisible. A sleeping animal possesses the "force" to rise, for there exists in it a latent, hidden molecular motion that may be transformed into visible mechanical motion. When the animal is dead it possesses this force no longer, for the inner molecular motion constituting the biological exchange of matter is no more. Hence, we may regard this force as molecular motion.

Motion tends always to propagate itself.

Why does it seem sometimes to disappear? Can it annul itself? No; as motion is not self-produced, so it is not self-destroyed. Therefore, when we see work of any kind—mechanical, electrical, nervic or psychic—disappear without visible effect, then of two things one, either

1. A transmission; or

2. A transformation.

In a medium that opposed no resistance, a motion would be transmitted indefinitely. Imagine a universe consisting of a medium motionless, but capable of being set in motion, and presenting no resistance, and to set that whole universe in motion, we should need only to give an impulse to one single atom. And were that atom alone, it would move on for all eternity. It would proceed in a right line, according to the old law of mechanics, but in an infinite circle according to the new—and that is the beginning of the scientific farces.[2] Suffice it to say that there would then be no reason why the motion should cease.

But the universe is not like that; there is resistance. What is

[1] *Réelle*, physical, opposed to *moral*, in par. 3.—*Translator.*

[2] *C'est ici que commencent les farces scientifiques.*

the meaning of this resistance? To explain it we have done as savages do—have endowed matter with the qualities that belong to ourselves. After having "objectivated" a subjective muscular feeling in the notion of "force," we proceeded to do the same for that which "opposes" force, giving to matter our own "inertia," our own indolence. Inertia has no existence any more than force, any more than absolute rest. But what does surely exist is *motion, which opposes another motion, if it is not of the same nature.*

What happens then? The initial motion is *transformed.*

Such is the great principle of the universe; not merely "transmission," as Puységur held, but *transformation.*

Where does the first end and where does the second begin? Physical philosophy gives us a very clear idea with regard to that point:

a. In an identical medium there is only transmission;

b. In a different medium there is transformation.

A dynamic nucleus, in propagating its motion, sends it out in every direction; but this transmission becomes perceptible only *on the lines of least resistance.* Hence we say that magnetism chooses iron; that heat, like sound, chooses good conductors; that a galvanic current gives the preference to a thick wire among many fine wires, as lightning chooses the line of its route, as a light-impression chooses the nerve that suits it, as the will chooses the fiber that serves its purpose; and so on.

But in reality nothing chooses anything. We it is that do this choosing, subjectively, owing to our inability to see invisible things. The pressure exerted by a liquid confined in a vessel is the same when its wall is intact as when a hole is pierced in it. But the liquid does not escape save when the wall is pierced, and then the other pressure concerns us little. Instead of a substance let us take a force. Cast a stone into a lake not far from the shore. The shock will produce a series of waves. These are visible on the surface of the water. Do they end at the shore? No! The land receives the shock like the water, and propagates it; only, it propagates it in its own way, invisibly. What does a force do that strikes a medium unsuitable to its kind of motion? It becomes transformed, that is all. It is so always, and there are no other causes of transformation. Transformation implies resistance. You send an electric current through a thick wire. You have the current, but you do not perceive any other force. But cut that thick wire and connect the ends by means of a fine wire: the fine wire will grow hot; there will be a transformation of a part of the current into *heat.* Carry the experiment further. Take a pretty strong current and interpose a wire still more resistent, or a very thin carbon rod. The carbon will emit *light*, and the light will be still more intense if you cut the carbon in two, introducing a conductor still more resistent—air. A part of the

current then is transformed into heat and light. Think you that this light acts only as light, and only in the lamp? Not so! It acts in every direction round about, first visibly as light, then invisibly as heat and as electric current. Hold a magnet near it. If the magnet is weak and movable, in the form of a magnetic needle, the beam of light will cause it to deviate; if it is strong and immovable, it will in turn cause the beam of light to deviate. The rays of light that impinge on the non-transparent vanes of a Crookes radiometer make the mill go round. And all this from a distance, without contact, without special conductors. And all this[1] because, somewhere far away, somebody turns a crank, or because an almost imperceptible chemical process is going on in a battery!

A process that is at once chemical, physical and psychical, goes on in a brain. A complex action of this kind is propagated through the gray matter, as waves are propagated in water. These phenomena are intense in a different way: their intensity is not mechanical, it is more subtile and more concentrated. What we call an idea is a strictly localized phenomenon. But we must not forget that to produce an idea, thousands of repeated impressions were necessary, and every one represents a force. That force is accumulated, condensed, as it were, in an idea. Regarded on its physiological side, an idea is only a vibration, a vibration that is propagated, yet which does not pass out of the medium in which it can exist as such. It is propagated as far as other like vibrations allow. It is propagated more widely if it assumes the character which subjectively we call *emotive*. An emotion is more expansive than an indifferent idea: it may occupy the whole brain to the disadvantage of all other ideas. But it cannot go beyond without being transformed. Nevertheless, like force in general, it cannot remain in isolation, it escapes in disguise. The official world of science allows it only one route—through the motor nerves. These are the openings in a dark lantern through which the luminous rays pass. But thought does not radiate like a flame, nor even like the heat of a flame, though that makes little account of the opaque walls that are impermeable to light.

Thought stays at home, as the chemical action of a battery remains in the battery; it is represented abroad by its dynamic correlate, called, in the case of the battery, a current, and in the case of the brain—I know not what: but whatever its name may be, it is the *dynamic correlate* of thought. This dynamic correlate is not, nor can be, restricted to the nervic currents of the motor fibers. It represents *all* the transformations of cerebral motion—transformations all the more subtile and all the more radical, as the difference is greater between the anatomic medium of thought and the environing

[1] The electrical and magnetic phenomena mentioned, *not* the revolution of the Light-mill.—*Translator*.

media: bodies solid, liquid, or gaseous, with the ether considered as the fourth state of matter and, relatively, filling the universe.

Let us halt for a moment. We have reached the conclusion that the motion that answers to thought cannot be exceptional in nature, and that like all force it is transformed into other forms of motion, logically necessary though for the most part unknown.

"No displacement of matter," says Mr. de Parville, "takes place in inanimate nature, no act, voluntary or unconscious, takes place in living nature, but that there is a production of electricity in exact ratio to the energy of the work expended."[1] Besides electricity, there is production of heat, production of mechanical motion, and, perhaps, production of light. But I do not intend to go into particulars. I believe we do not know one thousandth part of the molecular changes that a thought may produce, and we must content ourselves with simply noting the facts: here, as elsewhere, energy is transmitted and transformed.

CHAPTER VIII.

THE LAW OF REVERSIBILITY.

SO then we must regard thought as a dynamic act. That dynamic act is developed at the center of a larger dynamic focus which is called nerve-action; and the latter must be considered as a special mechanic action resting on a basis wider still—the whole vital aggregate. The entire organism has a dynamic *tone* peculiar to itself and dependent on the individual's general anatomical and physiological nature, as well as on his state of equilibrium at the moment. This equilibrium is governed by the nerve-tension, and the latter by the individual's psychic mobility. This triple dynamic microcosm acts upon a medium, first by its presence only, as a living mechanism, next by its state, as a nerve-system, finally by its thought, as a psychic center.

Motion being contagious, we can see that a *tone* that is sufficiently pronounced may be communicated to surrounding objects, and especially to another organism whose individual tone is less masterful, and which is distinguished by passive mobility and readiness to be modified. The influence no doubt is reciprocal, but it is the

[1] H. de Parville, "L'Électricité et ses Applications," p. 17. Paris, 1882.

stronger, the more largely constant, the more invasive modality that gives the tone. And then an extrane contact will produce either a dissonance unpleasant to the subject, or no effect at all, according to the firmness (*solidité*) of the dominant tone. When the effect is *nil*, we have to do with a strong, decisive current that withstands all interruption. The more the dynamic union is insured by contact, by repeated passes, by the physiological submission of the subject, the less is transmission balked and the less resistance it meets. Some kinds of motion—heat, electricity—can be communicated without perceptible modification ; others are transformed.

But neither the principle of communication nor that of transformation would be of much use in explaining mental suggestion, were they not complemented by another principle which may be stated in a general law of physics.

This we call the *law of reversibility*.[1]

We already know that all motion propagates itself (law of transmission); that all propagated force, when it meets resistance, is transformed (law of transformation); but we do not know what comes to pass on a second or a third transformation. Now it may happen that a motion twice transformed *shall regain its original character*. Under what circumstances might that happen? It might happen if the communicated motion were to find a medium *of the same kind as at its starting-point*. Such is the law of reversibility.

According to that principle a transformation is *always* reversible.

The thing seems, in theory, quite natural, but we must not forget that it is less evident in practice, for but rarely do the same conditions accompany a reiterated transformation. Electricity was for a long time produced by friction without ever a thought that friction, in turn, can be produced by electricity. The phonautograph, *i. e.*, the mechanical action of speech, was long known before men suspected that a mechanical action, in turn, may reproduce speech in Edison's phonograph.

Years ago it was known that under the influence of electricity the conductivity of glass as regards light may be changed ; but it is not long since it was found that, inversely, light can alter the electric conductivity of selenium.

Hence may be seen the utility of a law which assures us in advance that *if the effect A can be produced by the cause B, then, inversely, the effect B can be produced by the cause A*.

If mechanical work produces heat, inversely heat can produce mechanical work. Savages turned the first of these facts to account, the second was never seriously applied till the invention of the steam-engine.

If electricity in motion can produce a magnet, a magnet in motion

[1] See my essay, "Force as Motion" (in Polish). Warsaw, 1879.

can produce an electric current; and if we obtain a current by mechanical rotation, so, inversely, a current can produce mechanical rotation.

If a chemical action can develop light, light, in turn, can develop chemical action; and if this chemical action encounters certain special conditions, it will reproduce for us an image that was visible before chemical action, and which after chemical action becomes visible again in a photograph.

The magic of science does not cease there. Do you want, by the help of an ordinary lamp, to light another lamp miles away? To do so, you have only to set up a series of transmissions. You use your lamp to heat a Clamond thermelectric battery. The difference of temperature between two metals gives you a current. This current, you, being in Paris, send, say, to Versailles. There you oppose resistance to it by means of a very slender platinum wire. The platinum wire grows hot, and on touching the wick of a lamp, lights it.

But you needed to have a special *conductor* reaching from Paris to Versailles. You must have a conductor also to produce a reversed transformation of mechanical motion in a dynamo connected with an electric motor. One is needed also for reversed telephonic transmission. But a more surprising thing is, that there is a way of reproducing speech at a distance *without conducting wires.*

You substitute for the wire a ray of light.

Here is the principle of the photophone: A ray of light is reflected by a very thin mirror and projected to a distant point. Back of the mirror is fixed a mouthpiece. By speaking into the mouthpiece you cause the mirror to vibrate. A vibrating mirror modifies the reflection of light. The light that reaches the other station is modified by your speech, has your speech to carry, not as speech, but as represented in its mechanical correlate. It reaches the station and impinges on a lamina of selenium. The selenium is traversed by a local current. But the lamina of selenium offers to this current a resistance greater or less in proportion to the brightness of the ray that impinges upon it. This constantly modified current you pass into a telephone; it causes the disk of the telephone to vibrate according to the modifications it undergoes—and it reproduces your speech.

Is it possible that a ray of light may transmit speech? Most assuredly, for the thing has been done by Bell and Tainter. But what physicist 20 years ago would have admitted it?

Let us note what takes place when this experiment is performed. Your brain gives your thought, transformed, to the nerves; the nerves transmit it to the muscles and the vocal chords, they to the atmosphere, the atmosphere to the mirror, the mirror to the beam of light, *i. e.*, to the ether, the ether to the selenium, the selenium to the battery current, the current to the electro-magnet of the telephone,

the electro-magnet to the vibratory disk, the disk to the air, the air to the tympanic membrane, the tympanic membrane to the ossicles of the middle ear, these to the membrane of the labyrinth, that membrane to the liquid of the inner ear, that to the terminal organs of the auditory nerve; and, finally, that nerve conveys it to the brain. And that brain reproduces the thought of another brain. Why? Because the latest transmission has found a medium of the same kind as at its starting-point.

Think you that this was never done before Bell and Tainter's time? Why not? Everybody that ever spoke before a mirror—and, in a certain sense, everything is a mirror—sent his speech out into the whole world. And let us not forget that this is but one application of a general law. Everything is transmitted, everything is transformed, everything may be reproduced.

If anything is not reproduced visibly, palpably, the reason is that the conditions of reproduction are more or less remote from perfect likeness between the media. Find you a receiver that is sufficiently sensitive and you will have reproduction. In vain have you a telephone unless there is another telephone to act as receiver. But the telephone is but a coarse type of a biological reversed transmission. The photophone is a more delicate instrument: it does without wires; a ray of light serves its purpose. Some day we shall dispense with that one reflected ray, and will employ any intermediary whatever, a jet of water, a current of air. Inventions are ever advancing from the complex to the simple as regards fundamental principles, though in the details there may be greater complexity.

But observe what results from this experiment, to wit, among other things this, that light may be made a vehicle of speech. Well, in like manner the warmth of the hand may be made a vehicle of health or of a good intention.

The cry will be raised, *Mysticism!* So much worse for those that raise it: they will miss the opportunity for learning a grand truth! It matters little to me that the truth has been propagated by an ignorant crowd; forasmuch as it is truth let us give thanks to the crowd. Yes, as the *la* of a musical instrument is not the *la* of the vocal chord of a man or a woman, of an individuality, so the warmth of a hand is not the warmth of a poultice. Do not call in the thermometer to decide! A thermometer has no business to be the arbiter of such a difference, any more than a barometer has to judge the purity of the atmosphere, or a pair of scales to judge the quality of two wines. Let us be less boastful of our science, so our science may be more boastful of us. If everything could be learned in school, what, I ask myself, would be the use of the science that investigates?

One remark more. While availing ourselves of the law of transfor-

mation, we must not forget that the transformation is never total. I say *never*, and I mean it. In another place I have endeavored to prove that a force A is always transformed into more than a force B, C, D, etc. A blow with a hammer produces not only a mechanical concussion, but also heat, electricity, a sound, a magnetic change, sometimes a spark, and so on. Never is a force A transformed in its entirety into a force B. That is why the mechanical equivalent of heat cannot, in practice, be an absolutely constant quantity, and therefore it is that, instead of the word equivalent, I have chosen rather to use the term *dynamic correlate*. There is something more than that: the universe is neither void nor dead. A force that is transmitted meets other forces, and if it is transformed only little by little, it usually limits itself to *modifying* another force at its own cost, though without suffering perceptibly thereby. This is the case particularly with forces that are persistent, concentrated, well seconded by their medium: it is the case with the physiological equilibrium, nervic force, psychic force, ideas, emotions, tendencies. These modify environing forces without themselves disappearing; they are but imperceptibly transformed, and if the next man is of a nature exceptionally well adapted to them, they even *gain* in inductive action, as the magnet gains by contact with an armature of soft iron, to which, nevertheless, it communicates its force. A sentiment that is communicated loses nothing; on the contrary, a polar induction oftentimes strengthens it.

We should have to write a whole psychology and a whole philosophy of nature to elucidate sufficiently these subtile questions. Let it suffice to say that in "dead" nature there are found like phenomena. A spark produces a conflagration, but neither the conflagration itself nor even the first flicker is to be regarded as the mechanical equivalent of the spark. The latter does but *set free a series of latent forces*. If the magnetic telephone of itself produces the current which transmits speech, the same is not true of a microphonic transmitter. The latter requires a battery, and speech only modifies an existing current, impresses modifications upon it, charges it with a mission, without being thereby weakened. It is so with the magnetizer's thought.

CHAPTER IX.

FINAL SUPPOSITIONS.

LET us now betake ourselves to another station and observe what passes there. Let us take the case of sleep produced from a distance and strive to explain it.

Magnetizers tell us that their will concentrates the fluid and then projects it outward, approximately in a given direction, like a package of opium. So intelligent is this fluid, so complaisant, that it hies away with all speed, finds its road, goes round obstructions, and hits the subject. It enters the subject, and the moment it has duly *saturated* him sleep appears, brought on by action from afar or anear. All very clear, and in fact rather more rational than the old-time explanation of the action of opium, according to which the drug endorms one because of its *somniferous power*.

But in the first place the existence of the fluid needs to be proved; then that it can be shot forth, and that it can find its way; finally, that it will stop just when it has entered the nervous system of the subject; in short, the theory is not of much help to us. It describes the action by *substantializing* it, as Mesmer used to say.

Let us look at the matter from another side. Suppose for a moment the suggestional theory alone to be true, *i. e.*, that if the subject is put to sleep, he endorms himself by the act of his own imagination, by ideoplasty. The thought of sleep presents itself to his mind, finds a monoideic moment, and is realized. In that case it is enough that the imperative *thought* of sleeping be transmitted to the subject to cause him to sleep. This thought cannot come to him as a thought. Thoughts do not travel abroad, but we already know that thoughts send forth in every direction their dynamic correlate. There is no substance carried hither or thither, but a wave is propagated and modified more and more according to the different natures and the different resistances of the media it traverses. It may impinge on all manner of bodies without any *sensible* action; and I say *sensible* (that is perceptible by the senses) because it were contrary to the mechanical ground-principle of the universe to say that it has *no* action. (True, we are guilty every day of such inexactitudes. We say, for example, that the moon causes the flux and reflux of the ocean, but that it has no action upon the atmosphere or upon man.) The action, therefore, is general, but it is more or less imperceptible till the undulation finds a medium like the original one, and all the conditions requisite for a reversed

transformation. A brain B presents these conditions; in it the corresponding thought awakes, and brain B falls asleep.

"But then all the sensitive brains within the sphere of the action must be endormed also?"

Not so, for all those brains are not *regulated*, are not in rapport with the operator. I do not think it possible to act at a distance without rapport. And rapport consists in this, that the dynamic tone of the subject corresponds to that of the operator; that, through habit and training, the subject's brain has become quite specially sensitive to the slightest influences of the magnetizer.

Allowing that mental action from a distance is a fact, is it conscious or is it unconscious? That is to say, has the subject any intimation of it before he submits to it entirely?

Usually he has not. The transmission is mediate—from the conscious to the unconscious. The thought suggested does not enter into the normal polyideia; but, having found a moment of monoideia —a moment of *absolute* monoideia is never a moment of consciousness: who says *consciousness* says *polyideia* — it is realized forthwith by ideoplasty. It is, then, only in the somnambulic state that the subject can perceive the process of the influence and divine its cause. Often in such case the image of the operator is suggested at the same time, producing a veridical hallucination.

But it also happens that the subject divines the action before he submits completely to it. Sometimes even, particularly when the operator falters for a moment, the subject gets time to make resistance. In that case we have to do with an immediate suggestion that is insufficient either because of the operator or of the subject. But then, as a rule, the balked immediate suggestion is transformed into a mediate, a retarded suggestion, and that may later find its favorable moment.

The action may, therefore, be conscious or unconscious; but is it always purely cerebral? In other words, is transmission effected in the subject through the brain acting on the organism, or through the organism acting upon the brain?

According to Baragnon's hypothesis, that the transmission of sensations is the foundation of all mental suggestion, the nerves, they being affected first, re-act upon the brain.

Viewed from the ground of general physiology, this hypothesis is not without foundation. The law of reversibility applies no less to the physiology of the nervous system than to physics. If an emotion finds expression in a muscular attitude, that muscular attitude, when impressed upon a subject from without, may conversely produce an emotion. This is proved by Braid's *muscular suggestions*. So, too, transmitted sensations might reproduce the thoughts that accompanied them in the mind of the operator. But, in the first place, has

the operator actually in his mind the sensations of sleep when he produces sleep? To say that he has would be to do some violence to the facts. He has only the *idea* of sleep; and then I think that, at least as regards experiments made at a distance, the sympathic action of two brains is more easily conceivable than the sympathic action of nerves; and, since the brain itself suffices to produce, by centrifugal action, all possible sensations, it is best to regard the brain as the direct recipient of the mental action.

Hence I hold, or rather suppose, that an action at a distance may be exerted solely, or principally, through the intermediation of the brain.

True, we have admitted a physical action; nay, a local physical action. But it is almost impossible in hypnology in general to eliminate the co-operation of the brain, that is, of ideoplasty or of sensorial reflex action. You may, indeed, act upon one member separately; you may paralyze a single finger, or a single ear; but we must not be led astray by an apparent local action produced by passes, or by the hand, a magnet, metals, or sundry medicinal substances when brought near to the subject: even when the brain seems to be in deep sleep it may re-act through reversed ideorganic associations. Only one kind of local physical action seems to be admissible—the kind analogous to the communication of heat. I can warm a cold hand by holding it between my own warm hands, and then the action is not reflex, but purely physical. Probably there are other physical transmissions of the same sort. It is probable that a hand well supplied with blood, well fed by the normal currents of the muscles and nerves, a hand that transpires in the normal way, that, in short, is perfectly equilibrated in the sum of its molecular vibrations—it is theoretically probable, and true in fact, that such a hand can communicate its *tone* to a diseased part; can, by induction, revive a slowed molecular motion or a languid physiological exchange of matter; can stay dynamic excess of the vital processes, and can restore equilibrium when it is disturbed.

I can understand how all this may be done, even at a little distance, if the hand be directed toward the part affected. But I cannot well see how similar action can be performed from a great distance or from the opposite side of a wall; and I think that in such case there is no longer direct physical communication, but rather cerebral suggestion; and if Mesmer's subject (p. 260 *supra*) sensed at the other side of a wall the movements of the magnetizer's arms, he perhaps did so in virtue of a transformed and reversed thought-transmission and of mentally suggested ideoplasty, rather than of local physical action. But we will not dwell upon this question, for as yet it is not susceptible of thorough discussion. Nevertheless here are some inferences that I think may be drawn from several

of my experiments as well as from the experiments of Bertrand and other authors.

Contrary to what we should expect according to the theory of the exaltation of the senses, mental suggestion seems to be most successful when the senses are paralyzed. Then, too, we are certainly in presence of true thought-transmission. There is an *exaltation of the brain*—a quite special exaltation that we shall presently endeavor to make clear ; but there is no exaltation of the senses.

The question here mooted is full of difficulty, and I present my hypotheses concerning it with all reserve.

Mesmer, it seems to me, was once again right in regard to this. He held that the subject whose senses are *absolutely* paralyzed (as happens now and then in catalepsy and in ectasy), nevertheless hears his magnetizer, *hears him by mental suggestion.*[1] Speech, though uttered *viva voce*, directly impresses his brain, not his ear. It might happen that thought without speech would be insufficient to influence the subject, but even so the hypothesis would stand, for the transmission might be too weak unless aided by speech.

Mesmer was partly in error : he made too wide a generalization. He believed that *in all cases* whenever the subject hears only his magnetizer, he hears him mentally. But as we have seen, the phenomenon of rapport can in some measure be explained by a *specific* impressionability, by an *elective* perception, and we must always recur to influences that are known before we have recourse to an essentially new hypothesis. And yet, if instead of a relative anæsthesia we find absolute and general insensibility, so that a pistol fired suddenly alongside the ear of the subject produces no impression, no reflex motion, it is difficult indeed to understand how a word from the magnetizer, spoken also unexpectedly, and even with a change of voice, is heard perfectly well.

It is probable, then, that there are two kinds of mental suggestion : one conditioned on an exaltation of the senses—an exaltation with respect to sensations coming from the part of the magnetizer, constituting rapport ; and another conditioned on complete paralysis of the senses, with a quite exceptional exaltation of the brain.

In the latter case there is always a sort of fever localized in the brain alone. The head is hot. One would say that all the nerve force is concentrated in the hemispheres. There is hyperæmia, but hyperæmia of a special sort—hyperæmia *from electric tension*, one might call it ; it does not oppress the brain, it only gives it an excess of available, but latent vitality. The circulation is not rapid, but it may at any moment become more rapid than usual under the influence of the slightest excitation.

[1] Puységur, it will be remembered, mentions the case of a deaf patient who made answer to mental questions.

If it is the action of the vaso-constrictors that regulates the capillary circulation, then in this case we must concede to them an extraordinary mobility of excitation and relaxation. As for the electrical phenomena, they might be explained as follows: The classic researches of Du Bois-Reymond have shown that the currents proper to the nerves as well as to the muscles undergo a reduction of tension (*affaiblissement*) during nerve-action proper; that is, that a given quantity of energy manifests itself, now under the form of nerve-action, anon under the form of electric action. In the case we are considering the psychic nerve-action is null; but it may become very intense. Consequently, there must exist in the brain an exceptional electric tension, which, however, may disappear rapidly, and which in general is subject to great momentary changes. When the brain is in aideia the electric tension is high, and it excites the vasomotors, which contract the arteries. But because of the relative hyperæmia and the consequent tension of the blood, particularly of the arterial blood, the slightest reduction of the electric tension may increase the work of the nerves and cause a dilatation of the arteries. Hence we need only suppose that the electric currents of the atmosphere, modified by a psycho-physical transmission (as in the case of the photophone the ray of light is modified by speech), transmit that modification to the electric currents of the brain, which is, by the sum of these conditions, made amenable to the slightest influences, in order to understand the reproduction of a mental phenomenon transformed into its dynamic correlate.

I beg the reader not to be over-critical of this little excursion into the region of the invisible. It may be that things are quite otherwise; in particular it may be that this inward process is far more complex than it would seem to be from my conjectural sketch. One does the best one can so as not to seem awkward in the presence of a phenomenon that "upsets all the notions of physiology." Let us hope that, after all, it will not upset anything, and that it will shed a clear light upon many an obscure fact.[1]

To that end, we have to show that the phenomenon is closely connected with other phenomena that are near at hand and more or less known. If the law of reversibility explains action at a distance, it must also explain action from anear, and that should have its analogues in facts still more rudimentary.

As we have already remarked, mental action at a distance is

[1] On the question of the state of the brain in natural sleep, see the excellent work of Dr. A. M. Langlois: "Contributions à l'Étude du Sommeil Naturel et Artificiel," Dijon, 1877; an interesting essay by Dr. H. Haan: "Ueber die Beziehungen zwischen Hypnotismus und Cerebraler Blutfüllung," Wiesbaden, 1885; and a recent descriptive work, full of quotations, by Dr. Barth: "Du Sommeil Non-naturel." Paris, 1886.

closely associated with physical action from anear and with several phenomena of sympathism and of nervic contagion. Let us now descend still lower, to the very bottom of the scale, in order to discover the connection between the two series of phenomena.

Action at a distance exists within the individual organism. "It is," says Maudsley, "a characteristic property of the nervous system, that a local excitation is immediately transmitted to distant parts. How is this done? We know not. We may therefore designate the phenomenon either as sympathy or *consensus* of parts, induction, infection, or reflex action, or by any other name that, like an algebraic symbol, may express an unknown quantity." "How are we to account for the fact," says Mr. D. Whyte, "that sometimes the amputation of an arm or a leg produces contraction of the muscles of the jaw, rather than of any other organ?" Our ignorance thereanent need not surprise us; nobody knows why, in a sensitive plant, *Mimosa pudica* for example, excitation applied at one point is propagated throughout a whole leaf, and sometimes even to the neighboring leaves, which contract; in fact no one knows how electric induction is produced, nor why a single point of an excited muscle transmits the excitation through the entire length of the fibers, nor how the substance of a nerve is transformed in the electro-tonic state.

But in order to understand the principle there is no need to know all this in detail. The principle is manifestly contained in the laws we have just pointed out.

Any excitation caused by an anatomical or a purely dynamical change, whether spontaneous or induced, always constitutes a center of motion. This motion, like all motions in nature, is propagated. If it is propagated through an identical medium (nerve-fibers of the same kind), there is only transmission. If it enters a different medium there is transformation; and then it is that there is manifested, in the same individual, the phenomenon of sympathism.

An inflammatory state of the pituitary gland may be transmitted to the mucous membrane of the eyelids, larynx, lungs, intestines, anus, etc., in whole or in part, and then there is only transmission. But it may take place athwart the intermediate mucous membranes *without affecting them*, and then attack a remote point that individually constitutes a *nodus minoris resistentiæ*, for here, as elsewhere, the transmission becomes evident only along the routes of less resistance.

There will be complete transformation if two *different* organs react upon each other from a distance. Thus a displacement of the uterus may bring on an attack of melancholia, which disappears when the organ is restored to its place (Schröder van der Kolk); if the action goes to the brain, the reason is that the brain was specially

predisposed. I have noticed another sympathism of this sort. In an ataxic patient a displacement of the uterus produced sciatic pains that ceased directly after the organ was put in place. In this instance the sciatic nerves presented a favorable field (on account of the ataxy), while the brain resisted all influence. I have also seen dorsal anæsthesia transformed into nervous hepatic colic. The malady changed its place as well as its character from one day to the next, and I obtained a rapid cure by a series of those "transfers."

The state of pregnancy not infrequently produces mental alienation, but again it may restore sanity, so that a patient will be sane only during that period (Guislain, Griesinger). A pessary will instantly suppress melancholia in certain cases (Fleming, Maudsley), just as pressure on the ovaries may arrest an hysterical attack (Charcot), and in the male pressure on a testicle may arrest an attack of hysterical epilepsy (Abbe). It is known that the presence of worms in the intestine may cause nasal pruritus and other sympathic phenomena, and that a needle in the same region may produce convulsions.

But of special interest is total transmission with total transformation, seen in many complaints, and which has been observed by Dr. Darwin, and lately by Maudsley. There is a certain antagonism between *convulsions* and *delirium*. Very often delirium makes its appearance the moment the convulsions cease, and conversely. In such case the excitation of the spinal cord is transferred to the brain, and there is transformed under the influence of the medium.

On the other hand, when transmission takes place in a transverse direction, *i. e.*, from one side of the body to the other, it usually meets an homologous organ, and therefore does not change in character. Thus a headache, any neuralgia, a contraction or a contracture, an anæsthesia or a hyperæsthesia, passes from right to left, and the phenomenon of hypnotic "transfer" shows that *all* unilateral phenomena, sensations and hallucinations (Féré) may be transferred.

This phenomenon is well known in its essential features from the report of the commission appointed by the Biological Society (of Paris) to investigate Dr. Burq's metallotherapy. But sometimes the "transfer" presents peculiar characters. Here, for example, is an interesting fact observed by Ollivier: In a case of left hemianæsthesia, by puncturing the numb leg, that author produced a sense of pain at the corresponding point in the opposite one. I observed a similar fact in the case of a healthy young man, one of my pupils in the University of Lemberg. I could produce in B. a clearly localized anæsthesia in the waking state. I would draw on his forearm, *e. g.*, a square or a triangle, and with my finger would give the spot a slight massage; after a couple of minutes the square or the triangle of skin would be numb, but *sometimes* I could, by puncturing the arm,

produce in precisely the corresponding part of the other arm the painful sensation of pricking.

There exist therefore in the same organism :

a. An action at a distance (excitation reflected in a remote organ). Note that the excitation may be of psychic origin, and that all cases of *trophic* or *material ideoplasty* may be regarded as phenomena of mental action at a distance within the same organism ;[1]

b. A transmission with partial transformation apparently entire (transmission and transformation of the disease of one organ to another different one). Here, too, the starting point may be psychic ;[2]

c. A transfer of symptoms (that is, a reversed psychical or physical transmission to analogous bilateral organs).

Rising a step higher, we observe a transmission from one organism to another that is connected with it only by community of nutrition. I allude to the mother's influence on the fœtus. The fœtus is chloroformed when the mother is ; it undergoes the influence of all her sensorial excitations (Féré), and seemingly in some cases even moral action is shown. Theoretically I have ever held this fact to be one of necessary sequence, and I might even cite some convincing observations of my own ; but the question has, on the whole, received so little serious study that I purposely leave it out.[3]

Another kind of transmission, a little more remote still, is hereditary transmission,[4] which is psychical as well as physical. A strange fact ! Hereditary transmission is generally accepted, because there is a drop of albumen to be its vehicle and to afford a sort of basis for our imagination, while people refuse to believe in transmission by contact ; as though it were easier to conceive of a series of moral tendencies and aptitudes being locked up in a drop of matter ! Take, for instance, the case observed by Mr. Brown-Séquard : it will at the same time serve as an example of the inverse action of the fœtus on the mother :

" The fact recorded by Dr. Harvey, of Edinburgh, as having been observed in man and in certain animals, was very clearly presented in the guinea-pig. The mother was modified physically so as to resemble the father. Male guinea-pigs in which the cervical

[1] See Notes on Ideoplasty in the Appendix.

[2] For the influence of the brain on the other organs, see the excellent work of Dr. Hack-Tuke, " Body and Mind."

[3] Certain pointers are to be found in two interesting works, one written by a distinguished physician and strong scientific skeptic, Dr. J. B. Demangeon : " De l Imagination Considérée dans ses Effets Directs sur l'Homme et les Animaux," 2d ed., Paris, 1829 ; the other by an enthusiastic but *spirituel* schoolmaster, Frarière : " Éducation Antérieure, Influences Maternelles," etc. Paris, 1862. See also the chapter devoted to this question in Dr. Liébeault's excellent and classic essay, " Du Sommeil et des États Analogues," Paris, 1866.

[4] See Ribot, " Psychological Heredity." 2d ed. [Ribot's " Heredity " was done into English by the translator of the present work.]

sympathic nerve had been cut begot young that presented the effects of the severing of that nerve, and the mother, too, at the time of littering and afterward, showed the same effects."

So, then, the operation was performed on the sire, but the dam underwent the action! Is that in any degree less astonishing than nervic contagion or mental transmission?

At bottom all these phenomena are one. A drop of albumen as an intermediary is not more comprehensible than mere contact, or the environing media as intermediaries. In nature there are no absolute limits, all things are linked together in a gradual evolution. If the dam can become like to the sire through a physiological transmission; if the embryo, after inheriting from the sire, can communicate its malady to the dam; if nervous diseases are heritable, whether with or without transformation; if epilepsy in the child can be the sequel of insanity in the parents, or insanity in the child the sequel of epilepsy in the parents, then why should not the case be the same with regard to a close contact between two individuals—a contact much broader and much more direct than that of a spermatic corpuscle, which, after all, is not absorbed by the dam, but, on the contrary, is nourished and is transformed at her expense.

And nervic contagion once accepted, we are in the region of mental suggestion, and we reach it, as has been seen, by a series of intermediate phenomena: transmission of healthiness, of sensations of the magnetizer, of sensations of the subject, transmission of the sense of exhaustion, of aches and pains, of objective sensations, of emotions, of thoughts, and of will. Will-action at a distance is but the last term of a long evolutional series.

And at the bottom of all this there is but one thing, the same thing that underlies the relation of the magnet to iron, of the sun to the earth: transmission and transformation of motion. It remains only that we point out the applications.

What? Can mental suggestion have any practical application? When I began this study, I little thought myself that it could have; I supposed I was dealing only with questions of pure theory, and so, in accordance with Mr. Taine's dictum, when I came upon a new truth I cared but little to know whether it was of any use or not. But certain facts lately observed seem to be of a sort to justify an immediate application.

First, I would remark that the moment you admit the reality of mental suggestion you must make amend of honor to the magnetizers and reserve to that influence a certain part in the general practice of magnetism. One must not act like a machine, but must superadd to the suggestive or the physical action the influence of a concentrated thought and a firm will. True, the act is performed habitually without attaching any importance to this point, even without thinking of

it. But they who hypnotize often, or who parade their own purely subjective theories, neglect this resource, and then it happens, as it has happened to me, that they do not obtain all the results they might. For example, I put a question to an endormed patient that has always answered me readily. But it happens that to-day she is in a profounder sleep than usual; so, despite my reiterated questioning, she makes no reply. Supposing that there might be some contracture of the vocal muscles, I set them free by a few passes, but the patient still made no answer. The patient's right arm stirred, as though she wanted to write, so I set the arm free and gave her a pen. She wrote this word: "*Veuillez.*" [1] I did not understand her meaning and was annoyed, as she was also, still remaining aphasic. At length I said to her with more psychic energy: "Answer me; I want you to answer." She then replied and explained to me that she had been powerless to speak because I had not willed it with sufficient firmness.

On another occasion I had a patient whom it was very difficult to hypnotize, and in whom somnambulism did not manifest itself till after three months' treatment. After a few days some progress was made in endorming her, but thereafter for a whole year her sensibility remained *in statu quo.* It always took ten or fifteen minutes to endorm the patient. It was tiresome work, but I resigned myself to it and performed the passes listlessly. When a year had passed it occurred to me to add to the action of the "regard" not only a show of will but a positively stronger exercise of will-power, and in less than half the time the patient was endormed.

True, in this particular case, had I employed the same means earlier, I should probably have had no better success. The patient was insensible to all the finer magnetic agencies. But about the time referred to I noticed with astonishment that she was becoming sensitive to the magnet (sensitive, I mean, apart from the influence of the imagination, for under that influence she was from the first slightly sensitive to the hypnoscope). The magnet, when placed near her arm while she was in lethargic aideia, produced, for the first time, a general contracture. This it was that gave me the idea of trying mental action, which, by itself, never had any effect upon her, but which materially assisted the action of the hand or of the eye.

I know that in the great majority of cases mental action will be of little avail; but as one never knows when it may begin to be efficacious, one will do well to try it.

So, too, we must make use of it in therapeutic applications, and not make light of the advice of magnetizers, who require of the operator a certain moral sympathy with the patient, and a strong desire to do him good. We must take account of our physical and psychic state

[1] Imperative mode of the verb meaning *to will*, "exert will."—*Translator.*

at the moment, so as not to transmit to the patient an indisposition or a sense of depression.

Such are the general applications, but these are not all. Certain other facts have suggested to me a more special application.

At first I supposed (and the supposition seems entirely logical) that where verbal suggestion fails, mental suggestion will, *a fortiori*, be of no use.

That is a mistake. Mental suggestion may be of use, and even of great use.

It happens sometimes, particularly in nervous and mental complaints, that some subject, on being recalled to the patient's mind, produces untoward results. Yet, in some way or other, the matter has to be settled. A sensible physician knows how to deal with the natural or the morbid susceptibilities of his patient, and goes to work in a roundabout way. He brings the patient round by degrees. But very often this is of no avail, especially in somnambulism; the recollection of the most trivial circumstance may precipitate a paroxysm, the most trifling order looking in a given direction may excite opposition. Now, it is just in such cases that I have found mental suggestion of great use. I would add that the two subjects on whom I tried this experiment were not suggestionable directly, whether by speech or by mental action. In one case the question was about removing the patient's bed to another apartment. For certain reasons it was impossible to make the patient consent to the change, which, nevertheless, was intended for her own good. One day as I sat by her, she being endormed, I kept thinking for ten minutes at least, "You are going to have the bed taken into the other apartment;" "The bed must be taken into the other apartment," and so on. A few minutes afterward she began to talk with me about different things, and then suddenly, of her own accord, brought up the question of the bed without any excitement at all; for ten minutes she discussed the matter, and at last showed a disposition to agree to the change. Knowing as I did the conditions, I was almost sure that mental suggestion had had something to do with her sudden change of mind; but, to remove all doubt, I made another experiment. So again for about ten minutes I kept thinking, "You are going to put your right hand on your head;" "Put your right hand on your head," and so on. Immediate action there was none; but a quarter of an hour afterward she put her right hand on her head and kept it there for ten minutes, without any reasonable cause.

The reader recalls another case like this one, that of Miss Z. (p. 97 *supra*), who would not go to bed, and who, after withstanding all sorts of verbal persuasion, succumbed to a suggestion not expressed in words, to a *retarded* mental suggestion.

On the whole, my latest observations seem to prove that retarded

mental suggestion is far more common than one might suppose, *i. e.*, that it may succeed where immediate direct action is absolutely null.

That is a result that assuredly will have weight, should it be confirmed by wider observation.

Finally, we may remark that with subjects with whom direct suggestion is possible, the therapeutic application may be made whenever a train of mental associations is to be broken or another train to be set up without the subject suspecting your intention, for, as we know, the mental suggestion may be entirely unnoticed : the subject, though he obeys it, still thinks he is acting from his own personal motives.

Shall I say anything about theoretical applications? They are very many. A multitude of facts hitherto inadmissible may, nay must, henceforward be examined seriously. In short, psycho-physical transmission may be able to account for :

1. Certain cases of instinctive appreciation of diseases ;
2. Certain cases of direct nervic contagion ;
3. Certain illusions of observers that have not guarded against a mental influence ;
4. Certain cases of alleged second-sight ;
5. Certain phenomena of veridical hallucination, hard to believe, but in some instances well attested ;
6. Communication of certain sensations in the dreams of normal sleep ;
7. The alleged divinations of "rapping spirits ;"
8. The mysterious influence of certain personages ;
9. The difference between one "hypnotizer" and another ;
10. Sundry facts recorded in the history of civilization and credited to demons, oracles, sorcerers, obsessed persons, etc.[1]

[1] Here is an alleged case of psycho-physical transmission of a kind not mentioned by our author, and the reader may set a big interrogation point over against it, but let him recall Arago's dictum :

"The strange case of a north-western Kansas girl is attracting much attention. Her life will be studied at the summer meeting of the English Psychical Society. She is Mary Vennum, a resident of Rawlins County, and it is believed that she has lived two lives.

"The Vennum family lived near a family named Koff. The latter had a daughter about the age of Mary, who died of epilepsy. Mary Vennum was also subject to this disease.

"While she was suffering from an attack the Koffs called on her, and were startled to see how closely she resembled their daughter. After many hours of suffering Mary came out of her fit, and, although she was not changed in feature, she seemed entirely changed in mind.

"To all intents and purposes she became Mary Koff. Where the latter's life was broken off she took it up, and she was allowed to go and live with the Koffs, her family hoping it would cure her. She was perfectly content in her new home, and from the moment she stepped inside the door seemed familiar with the household. Though she had never visited the house before, she seemed to recognize the belongings of the dead girl as her own. On one occasion she ran through the house, saying :

"'Mother, where is my pink cape?'

"But will not that be simply a revival of occultism and magic?"

Precisely so. Nor shall I complain, for this occultism and this magic come back *as a science*. They may regenerate science. Latter-day science is slightly at fault for lack of imagination. She has become "routinized," has shut herself up in a bleak and arid region, has puttered with petty details, petty measures, and petty formulas, all highly useful and necessary; but they never can constitute a *science*. A science is not complete without a general conception, that is, a philosophical conception. In the past the philosophical imagination was so misused, we think it our duty to do entirely without it. Men think that the scientific positivism that debars the study of "efficient" causes and "final" causes as in fact beyond our ken *in our present stage of evolution*, must debar such study forever, and not only that, but the study of every alleged phenomenon that seems visibly to lie beyond the boundary of our knowledge.

Such prejudice is to be condemned. The old unscientific systems are dead, and that is well; but it is not well that no better system has come to take their place. We must advance with all caution, but we must *advance*, not only with regard to minor observations, but also with regard to a *philosophic conception* that shall steadily become broader, bolder and more profound.

Now, we shall never attain a view of the sum of phenomena unless we free ourselves from the routine of the schools, and unless we attack manfully the problems of occultism and magic.

For, take note, the sensist doctrine itself holds that man does not invent problems, but derives them from his experience. Magic is only an experimental science set on a wrong basis, distorted, incomplete, degenerated—what you will: yet a science *in its beginnings* experimental. Let us take up anew these studies with the improved instrumentalities that we possess, with the precise methods we are so proud of, and we shall see a progress we look not for take its start from this alliance between the past and the present—we shall see a new Renascence. I am mistaken or it is already begun.

The great discoveries and inventions of these latter years bear the stamp of the marvelous as well as of strict method: disks of metal and light-rays are made to speak, we make chemical analysis of the heavenly bodies, we attack the problem of electric vision at a distance, we bring to the front again the medical lore of the exorcists and the miracles of the *stigmatizati*, we exhume the ancient spiritism, we go

"'What do you mean?' asked Mrs. Koff, and then she rembered that her daughter had had a pink calico cape, which she wore before she died. Again she inquired:

"'Where is Gyp? I want to see him. I am afraid he has not been properly cared for.'

"Gyp had been the favorite dog of Mary Koff, and had been dead for six years. His name had never been mentioned before Mary Vennum, and Mrs. Koff does not remember having ever spoken of him since their acquaintance with the Vennums."—*Newspaper telegram, dated Abilene, Kan., July* 3, 1891.

back to the amulets of metallotherapy, to the massage of olden priest-craft, to the magic formularies of the Orient.

So much the better! I like well to see this awaking of a spirit mature and strong to the phantasies of youth. Can it be that we are not quite so sure of the soundness of our logic, of our mental equilibrium, and of our positive tendencies, rooted as they are by the experience of a century, as not to be afeared of an outbreak of mysticism?

No! Occultism is not a source of danger to civilization in that it exists, but in that it has possessed itself of some rays of light which science does not strive to regain for itself.

Clearly there will ever be unkempt enthusiasts whose delight it is to contemplate the vague and the obscure. But it is not such as these that keep alive popular errors and prejudgments. Those errors are kept alive by the aspirations of those who, dissatisfied with a science that only makes darkness visible, look for a clearer light, and seek it after the manner of night-flitting moths: they singe their wings.

An intelligent physician, of lively imagination, a sincere inquirer, but a skeptic from scientific routine, attended a spiritist seance. He went there to oblige a friend, not even out of curiosity, being convinced that the whole thing was "imposture or illusion." With a smile on his lips he put a few questions to the "spirits," just to expose the stupidity of mankind. But the "spirit" took his revenge. The medium's unconscious divined his thoughts, and our skeptic was confounded, amazed, and like an honest man published the truth. Inasmuch as science has never troubled itself about the phenomenon of mental suggestion, he knew nothing about it, and believed it impossible; so he fell into mysticism, became a spiritist, and is engaged in propagating the contagion.

Science lost a useful man. Why? Because from vanity, or from over-confidence, it disregarded the discoveries of its fallen rival.

No; mental suggestion does not favor occultism, on the contrary it banishes it. And once recognized, once regenerated by positive science, it will interpret to us, in language more forceful and more worthy of our age, the mysterious echo of ancient truths.

APPENDIX.

I.

NOTE ON A CRITERION OF HYPNOTIC SENSIBILITY; THE HYPNOSCOPE; A NEW METHOD OF DIAGNOSIS. By J. OCHOROWICZ. Presented to the (Paris) Biological Society by Mr. CH. RICHET, May 17, 1884.

I have the honor to present to the Society the results of my researches made in 1880-82 in the University of Lemberg, in Cracow, in Warsaw, in the Tatra mountains, and during the last two years in Paris. As I consider them to be of some practical value, I propose to give a brief account of them before publishing the observations in detail. I will point out the advantages to be gained for physiology and medicine from the physiological action of the magnet. That action, as I am well aware, is by no means accepted by all; but from the *empiric* point of view, which I am at this moment taking, I can leave to the reader the liberty of looking on this action as purely psychic or suggestional: the results will be none the less true, none the less important.

The form of magnet that I have definitively settled upon as the best for practical use, is much like Joule's electro-magnet, differing from it in that in mine the lines of force are inside instead of outside of the magnetized tube. To distinguish the style of magnet that I employ from all others, to avoid repetition, and to indicate the purpose for which it is used, I call this little apparatus a "hypnoscope." I hope it will, before long, find its place in medical practice alongside Weber's æsthesiometer.

The advantage gained by the use of the hypnoscope is twofold:

1. It gives us the criterion of hypnotic sensibility, *i. e.*, facilitates greatly investigation of the phenomena of hypnotism;

2. It gives to the physician a new means of diagnosis in nervous disorders.

The mode of applying it is as follows: the index finger of the person to be tested is introduced into the tube of the hypnoscope so as to touch both poles at once; after two minutes the finger is withdrawn and the effects produced in the finger are examined.

In seventy persons in one hundred taken at random no change will be observed. In about thirty, two kinds of effects will be noticed: subjective effects and objective. The former consist of subjective sensations, chiefly these: a feeling as of a breath of cool or warm air, a tingling or pricking sensation, a feeling as if the skin were puffed out, numbness of the muscles, pains of different kinds, a sense of heaviness in the finger or in the whole arm, etc. The objective effects belong to one or other of these three categories;

1. Involuntary movements: uncontrollable tremor of the index finger, or of the whole arm;

2. Insensibility more or less pronounced, analgesia, anæsthesia, especially in the tip of the finger, sometimes in the whole arm;

3. Paralysis and contracture, more or less manifest, amounting sometimes to complete rigidity; elastic rigidity (what Nélaton calls *doigt à ressort*).[1]

The phenomena thus produced disappear after a few minutes under very gentle massage; without massage they may continue for several minutes, or even for several hours.

There is a constant parallelism between this faculty of being influenced by a magnet and *hypnotic sensibility*. All persons who show sensibility to the magnet are more or less hypnotizable; all other persons are refractory.

The number and the degree of the effects, subjective and objective, correspond to the degree of the person's hypnotic sensibility. Whenever the subjective and objective phenomena are easily produced, one may infer a high degree of sensibility; the sensibility is small when but one of the three classes of effects is exhibited, or when the effects are but little marked. But one must be on his guard against purely accidental sensations produced by emotion. These are easily recognized, for the true sensations always reappear when the test is repeated, while the imaginary ones disappear, or change their character at the second trial.

The few exceptions to the above-mentioned general rule can always be traced to secondary causes, and rather confirm the rule. It is known, for instance, that the *habit* of being influenced by *stimuli* of a definite kind enhances the sensibility for that sort of *stimuli*, and so it may be that a person that has been frequently hypnotized by a given method will be relatively *less* sensitive to the magnet on the first trial; but we have only to take the same course with the magnet in order to bring out the normal parallelism, as is seen when after the hypnoscopic test hypnotization is tried for the first time.

I would remark further that hypnotic sensibility on the one hand, and magnetic sensibility on the other, may be modified, or even done

[1] Literally "finger with a spring," *i. e.*, one that when bent springs back to its original posture, as if it were actuated by a spring.— *Translator.*

away by *suggestion in the monoideic state*. Nor must it be forgotten that "hypnotic sensibility" is not synonymous with "somnambulism with loss of memory." The latter phenomenon cannot be produced in more than about 15 per 100 of subjects, while with 15 per cent. more several phenomena can be obtained without complete sleep.

It happens even that we may by the aid of the hypnoscope discover a very high degree of sensibility, restricted, however, to inhibitory phenomena of muscles, and in that case the subject will be readily hypnotizable in the sense that it will be possible to tetanize him completely, though we may be unable to endorm him. More rarely we observe with the aid of the hypnoscope *insensibility alone*, and then, too, it is difficult to produce sleep, and impossible to produce contractures.

In short, the hypnoscope reveals to us a special nervic aptitude peculiar to a relatively large number of persons who enjoy, or seem to enjoy, perfect health. This aptitude is not synonymous with general nervousness, for a good many exceedingly nervous persons are refractory to the action of the magnet and to hypnotization, while we find excellent subjects among those who are not at all "nervous." Women in vigorous health have in general less sensibility than men, but among persons suffering from disease the women have by far the greater sensibility. Sometimes the proportion is, for women, 45 per cent.; for men, 35 per cent. But it is certain that in nervous disorders the hypnotic sensibility is great, and that of the victims of the major hysteria but few are refractory.

Nevertheless, we must not confound hysteria, epilepsy, neurasthenia, still less anæmia, with hypnotic sensibility, which is a complex aptitude, but *sui generis*. It probably depends on special reflex relations subsisting between the cerebro-spinal system and the ganglionic system, and, above all, between the brain and the vasomotor nerves.

It remains that I make a few observations upon the use of the magnet as an instrument of diagnosis. A simple hypnoscopic experiment of itself gives us a deep insight into the mysteries of the patient's nervous system. It brings out in a minute all the weak points of his nervous organization, one after another. If there is any functional anomaly whatever, the patient will for a moment feel pains, or will be seized with convulsions; complaints that are past and gone, and that for years have made no sign, make their appearance for an instant in miniature; the tendencies of nascent diseases are revealed; epileptics feel the oncoming of an attack (but the actual attack is even thereby deferred and made milder); we are enabled readily to distinguish functional anæsthesis or paralysis from organic, for the former begins to disappear under the magnet, and where the complaint is clearly organic there is always hope of betterment when the hypnoscope produces any effect at all. In many cases of paraplegia we are able

to determine exactly the limits of the spinal lesion by passing a magnet along the vertebral column. In some cases of neuralgia and of paresis, the magnet produces heat on one side and intense cold on the other, thus indicating exactly the sensor or the motor nerves affected by the disease, and so on. Hence it would be an unpardonable negligence were one obstinately to reject this harmless agency—one, too, so instructive—on the pretext that the physiological action of the magnet is as yet unknown. In the revelations of the hypnoscope I see the necessity of a discrimination in therapeutic. It begins to be seen that it is useless, or even imprudent, to apply the self-same remedies to sensitive patients as to those without sensibility. With very many hypnotizable patients remedies are all equally good or equally bad, according to the particular nervic influences. We can *by suggestion* neutralize the strongest doses of the most typical medicines, and again by suggestion we can produce their typical effects in the most unmistakable way. With sensitive patients we often bring about a change for the better in an instant by means of a number of simple operations that hypnotism and magnetism place at our disposal. Will physicians still insist on administering poisons which do injury even when they cure ?

II.

ON IDEOPLASTY; THE FACTS CLASSIFIED. Note by DR. JULIAN OCHOROWICZ, presented to the (Paris) Biological Society, June 21, 1884.

Ideoplasty[1] signifies physiological realization of an idea. It includes all the phenomena that come under the term (vocal) "suggestion," and also all similar phenomena produced without the intervention of a second party, *i. e.*, all the phenomena of "self-suggestion," or "spontaneous suggestion." Thus we have ideoplasty whenever the thought alone of any functional modification determines such functional modification.

The phenomena of ideoplasty are but instances of the action of a general law, to wit, the *law of reversibility*. All transformations of force are reversible. If heat can produce mechanical motion, so mechanical motion can produce heat. If electricity produces magnetism, magnetism too can develop electric currents. If the voice can cause undulatory currents, so can such currents reproduce the voice; and so on. This law is of the highest philosophic importance, because it enables us to foresee the inverse transformation once the direct transformation is verified; and it often happens that the transformation of *a* into *b* is fully known, while the transformation of *b*

[1] The word was first employed by Dr. Phillips in a slightly different sense. See his "Cours Théorique et Pratique de Braidisme," p. 44, *sqq*. Paris, 1868.

into *a* has yet to be made out. For example, the phonautograph (mechanical motion caused by speech) was known for a long time before any one dreamed of the possibility of an inverse transformation, *i. e.*, the reproduction of speech by mechanical motion (the phonograph).

So then ideoplasty is an instance of the operation of this universal law of nature. Commonly it is the sensation that gives rise to the thought ; in ideoplasty it is the idea that gives rise to the sensation. This inverse transformation is called *hallucination* when it occurs spontaneously, and we have habitually given to suggestion the name of artificial (*provoquée*) hallucination. In both forms there is *ideoplasty of sensations*, or *passive ideoplasty*. This may be either positive or negative. It is *positive* when it determines perception of an excitant that does not exist ; it is *negative* when it renders perception of a real agent impossible. Phenomena of the former class are well known, those of the latter class not so well, but I have many a time had evidence that it is possible for example to render *invisible* to the subject, even in the waking state, a person, an object, or a portion of an object or of a person ; so that the retina of the hypnotizable subject, even when awake, shall be absolutely insensible to a given object. And if, for instance, the magnetizer renders invisible a person that is smoking a cigarette, the person, the cigarette and the smoke will be invisible to the subject ; but if the person lights another cigarette that has not been bewitched by negative ideoplasty, the subject will be amazed to see a lighted cigarette moving through the air.

Besides ideoplasty of sensations there is another kind of ideoplasty, which we shall call *ideoplasty of movements*, or *active ideoplasty*. Like ideoplasty of sensations, it may be either positive or negative. Examples : 1. The thought of yawning of itself produces yawning; or one suggests to a somnambulic subject any movement, and it is impossible for him to refrain from performing it. In this way we can, for instance, command the writing of a testament, or even the commission of a murder, nay, even suicide. In the state of monoideism, the object of the suggestion is indifferent, for the subject is totally incapable of resisting. Recent experiments have proved this, and the fact is beyond question. 2. So, too, we can *hinder* the performance of certain voluntary movements. You draw an imaginary line, for instance, and the subject finds it impossible to overstep it, not because of any momentary paralysis of the muscles, for they may remain supple, but because of a *momentary amnesia of the bodily movements* at a given instant ; for there is psychic amnesia of ambulation just as there is amnesia of words. But it is the thought of the impossibility of movement that renders it impossible : this, therefore, is negative active ideoplasty.

The two categories just mentioned do not include all the phenomena of ideoplasty. There is a third, which embraces facts that are truly surprising : this we shall call *material* (or *trophic*) ideoplasty. We have to do now, not with a subjective sensitivo-motor effect, but with a real, an objective change in the vital functions, and in particular of the vegetative functions. Material ideoplasty may also be either positive or negative. It is a common thing for a person after receiving a burn mentally to represent to himself the pain of a burn, but is it possible for the idea of a burn to produce an actual local inflammation ?

However improbable that may seem, it is none the less true. By dint of protracted passive ideoplasty, local inflammation may sometimes be produced, or even a blister ; and inversely I have in one case succeeded in dissipating, by means of suggestion in the hypnotic state, a very definite dental fluxion of two days' standing. Beginning with passive hallucinative ideoplasty I procured the complete disappearance of the boil in 25 minutes. These experiments account for the extraordinary fact of *stigmata*, and they are well worthy of being repeated by other magnetizers. Again, we can, by prolonged suggestion, produce not only the sensations of heat and cold, but also an actual increase of the surface temperature. In one instance I obtained a diminution of 0.9°,[1] and the diminution lasted several hours. So, too, we can lessen or increase the rate of pulsation, the secretions, and in general the physiological exchange of matter. We can give the subject a prodigious appetite and cram him for hours. We can at pleasure fix with precision the duration of natural sleep, and can cure insomnia. Finally, we can alter for several weeks the appetences and the moral character of a subject. It is impossible to cite here all the facts observed by me, but these will suffice, I hope, to win the attention of physiologists.

And just as we can produce material modifications in the functions of the subject, so, too, we can *save him* from influences that else would produce certain functional modifications. This is an instance of *negative* material ideoplasty. It is possible, for example, by simple suggestion in the state of monoideism, to render the subject totally refractory to a strong dose of alcohol, opium, morphine, or the like. I venture even to hold the opinion that the effect of a lethal dose of poison might at least be reduced ; and it would be well to try this method of psychic inoculation in cases of hydrophobia and of cholera when the patients happen to be hypnotizable subjects.

In general, in all the three categories of ideoplasty, just as it is possible to produce certain pathologic functional changes, so it is often possible, too, to cause them to disappear when they arise spontaneously as diseases. This is mind-cure, and it has been unjustly neglected.

[1] Centigrade.

Persons who are sensitive to ideoplastic influences are keenly sensitive to the hypnoscope.

I reserve for a future communication a sketch of a psycho-physiological theory of ideoplasty.

III.

On the Theory of Ideoplasty. Note by Dr. J. Ochorowicz, presented to the (Paris) Biological Society, June 28, 1884.

According to the classification set forth in my preceding communication, three categories of ideoplastic phenomena may be distinguished, viz. :

1. Ideoplasty of sensations : positive and negative ;
2. Ideoplasty of movements : positive and negative ;
3. Material or trophic ideoplasty : positive and negative.

It remains for us now to explain the facts. Explaining means reducing an isolated fact to known conditions that suffice and that are necessary. The conditions of ideoplasty are twofold : psychic and physiological.

Psychic Conditions. Ideas may be regarded as in a certain sense *forces.* They are linked together by associations, and their action, as a rule, is manifested inwardly only. If they are to produce an effect external with respect to the brain, there must be either an excitation from without or an *act of will.* In ideoplasty it is otherwise, the idea producing an effect without any sufficient external excitation, and independently of any act of will, sometimes even counter to excitations and will. Whence this autonomy of ideas? It comes of an increase of their intensity. The idea of a source of light, as that idea grows in intensity, becomes transformed into a sensation of light. The representation[1] of a movement, by becoming more intense, produces that movement ; and so on. And what is the cause of this increase of intensity? This : ordinarily an idea never presents itself alone, but is always associated with a group of other ideas. While I am thinking of a lion that I do not see, I see the paper on which I am writing these words ; I see my hand, the pen, the writing ; I am conscious of the position of my members ; I hear the noises of the street ; and so on. All these ideas, sensations, and representations are pictured in my mind with more or less distinctness. The greater their number, the less distinct are they, for they rub one another out, paralyze one another. When I concentrate my thought upon a distant sound, I catch that sound more clearly ; but at the same time I

[1] *Representation* here = *idea* above. Both terms are used by the author to mean the *residuum* of a sense-impression in the mind when the outward object no longer presents itself actually to the senses.—*Translator.*

am relatively insensible to other sounds ; and often while we wait impatiently for a signal that has been agreed upon to be given, we get it through ideoplasty before it has really been given. Hence it is through an *isolating of the attention*, by elimination of extrane ideas, that the dominant idea gains its exceptional intensity. It is stronger than usual because it stands *alone*, and because it meets no obstacles within. I may, while writing, represent to myself the act of yawning, and the representation will rest in my mind as a mere recollection of a reflex movement, being counterbalanced by other ideas; but if, having nothing to occupy my thoughts, I contemplate passively a person that is yawning, I myself shall begin to yawn through imitative ideoplasty. In all cases of ideoplasty one psychic condition is essential : to wit, there must be a marked tendency toward monoideism, *i.e.*, toward isolation of the dominant idea. Otherwise that idea will remain weak, and will be unable to translate itself into a sensation or a motion. Material ideoplasty betokens a still more pronounced state of monoideism. Material ideoplasty cannot be produced save in the perfect hypnotic state (though that be but momentary), and by vigorous and prolonged monoideic action. Then it is that the idea attains the maximum of its potency, and reigns supreme. All extrane sensations are done away, and the mind is become *tabula rasa* whereon the suggested idea is reflected with unwonted intensity. The dominant idea then controls the entire nervous system.

But how can the idea of a hæmorrhage, for example, which is simply something subjective, mental, produce actual hæmorrhage, which is an objective, material fact? To understand that we must consider the physiological conditions.

Physiological Conditions.—Doubtless the trophic changes produced by material ideoplasty are brought about by the agency of the vasomotor nerves. A super-excitation or a paralysis of these nerves in their different combinations, might account for them more or less fully. But how comes an *idea* to influence the vasomotor nerves? Strictly speaking, it is not the idea as such that determines these changes. The idea is but the starting-point of an action, not the agent properly so-called. And here I desire to call attention to a class of associations highly important, but not much studied. It is not to be supposed that only *ideas* associate with one another. There are also psycho-physical associations between ideas on the one hand, and certain organic states on the other. These states, which are physiological complexes of great diversity, never reach the consciousness : we can move one finger or another, albeit we have no notion either of the nerves or of the muscles, or of the nerve currents that have to come into play to produce such movements. It is *ideorganic association* that sees to the execution of our will. This association is

partly hereditary, partly acquired, but even so far as it is acquired, it is still unconscious; only the first link of the chain, to wit, the idea, reaches the conciousness. Now, in material ideoplasty we have to do with associations of this sort. On the one side is the idea of a change; on the other an organic complexus that effects the change. And as, in the reproduction of ideas, the idea that is present awakens a past sensation or a past movement, so here the dominant idea calls up some particular organic state wherewith it is in unconscious association. We have here a sort of memory, but an unconscious, a materialized memory.

And a right strong memory it is. If, on the one hand, pathological states of organs may determine morbid ideas in the brain, on the other hand, in virtue of the law of reversibility, ideas favorable or unfavorable to health may mend or mar the general state of the organism. The influence is perfectly mutual, for *it is exerted between two links of one same chain of association.* Sometimes a mere change of surroundings suffices to produce a betterment; for, in a given place, everything, however indifferent in itself, is, in an unconscious way, associated with a morbid state, and tends to produce it, to maintain it, favors its continuance *through ideorganic association.* There are persons (the fact has been noted by Boerhaave) in whom the idea of a disease, the exact representation of its symptoms, suffices to determine the disease itself—the real ailment. That is an extreme case, but the agency that there comes into play remains. When some one tells us of a "stifling heat," we understand well what he is talking about, for the idea of heat calls up in us the physiological state of being heated. Suppose a greater degree of sensibility, an exceptional power of ideorganic reproduction, and you shall see an actual rise of the subject's temperature. If it is true, as has been well remarked by Mr. Brown-Séquard, that the phenomena of hypnotism are but manifestations of inhibition or of dynamogeny, then the phenomena of ideoplasty are only facts of inhibition or of dynamogeny conditioned by an ideorganic association, while the other cases of inhibition and dynamogeny depend on associations purely physiological—*inter-organic.* If, for example, excitation of the splanchnic nerve arrests movements of the intestine, that is because these two phenomena apparently so far apart—irritation of the splanchnic nerve and paresis of the muscles of the cœcum—are, in some way more or less unknown, physiologically associated, as a given feeling or sentiment is associated with certain expressional movements. The theory of inter-organic and ideorganic associations do not, it is true, explain what unfortunately remains unexplainable in the present state of our knowledge, to wit, the real *cause* of most of these associations; still it may, at all events, I hope, contribute to bring a number of highly diverse facts under one law and into one

associational mechanism. Psychology and physiology are thus brought together, and we can henceforth investigate the laws of physiological as we have already studied those of psychic associations. It is *when it loses its psychic associations* in the state of monoideism, that *the idea recovers its organic associations*, that it links itself to them, that it produces modifications in the organs with a force the more decisive and irresistible as it is itself potent and irresistible. It becomes confounded, so to speak, with the state it represents; it realizes it. One might say that cases of inter-organic inhibition are, for the most part, associations *by contrast*, wherein excitation of *a* is associated with inhibition of *b*; while cases of dynamogeny are associations *by likeness*, wherein an excitation *a* is followed by excitation *b*. And these associations may be causal, indissoluble, or they may be merely accidental; for, just as between ideas, so there are physiological associations *by contiguity*, that is, associations brought about by simple proximity in space or time. The morbid state *a* becomes associated with another morbid state *b*, through the mere fact that accidental causes have produced them, either simultaneously or one after the other. Thenceforth to call out *b* all that is needed is the presence of *a*. Such ideorganic associations *by contiguity* are often mistaken for causal associations. It is supposed, for example, that "the somnambulic state is induced by pressure on the top of the head," whereas between the two phenomena there is no causal relation.

In this brief notice I have had no other intention save to sketch roughly the general principles of a theory of ideoplasty. I have, therefore, purposely omitted any analysis of the special physiological conditions, as also any comparison of these general remarks with the theories of ideoplastic phenomena put forth by Braid, Durand, Charpignon, Liébeault and Bernheim.

IV.

Note to Chapter VII., Part II.

Mr. Bernheim makes this reply to my criticism:

"I said," he writes, "'No one can be endormed against his will.' Mr. Ochorowicz hotly contests that proposition. Probably he has not quite grasped my meaning. It is certain that a subject that is unwilling to be hypnotized, *and who knows that he cannot be hypnotized if he is unwilling*, successfully resists all efforts. It is true, also, that certain subjects are unable to resist, *because their will is weakened by fear or by the thought of a superior force that influences them in spite of themselves*." (Bernheim, "De la Suggestion," preface, p. iv., 2d ed., 1888.)

Now, these provisos suffice to show that the exactitude of the proposition "No one can be endormed against his will," may rightfully be challenged. For, first, "the will may be weakened by fear, and consequently may be insufficient; and, secondly, the subject may not know that he cannot be hypnotized if he resists."

Now, we find exactly these two conditions in most cases of hypnotic constraint. A subject wants to resist, but has not the strength to resist. Or, one wants to resist, but is not quite certain that he can resist, and so he undergoes the action *against his will*. There is the principal condition! Faith, submission, the best will in the world to be hypnotized, are all of no avail in the absence of predisposition, *of hypnotic sensibility;* and incredulity and opposition do not suffice to safeguard the subject when there is predisposition, when he possesses in a high degree hypnotic sensibility.

One is not a somnambule because he wants to be; but those who are somnambules may be unable to resist, unless they have in their mind a sufficiently strong counter-suggestion. Unfortunately, the Nancy School confounds hypnotic sleep with normal sleep, and consequently overlooks the main rôle of predisposition.

Mr. Bernheim sums up by saying: "No one can be hypnotized, unless he has the idea that he will be hypnotized. Thus expressed, my proposition is impregnable."

By no means. The proposition is now nearer the truth, inasmuch as it covers a larger number of facts, but still it is inexact. Miss X. (chap. vii., part ii., obs. 1 and 2) did not know that she was going to be hypnotized. Hypnotized she was, nevertheless.

The same conditions are found in cases 4, 5, 6, 9, etc. It were nearer the truth to add that the *idea* of which Mr. Bernheim speaks may be *unconscious*. Thus filled out, is the proposition at last flawless? Possibly, but without entering on theoretic subtilities, we are obliged to affirm this much:

The facts prove that, given a sufficient hypnotic sensibility, an individual may be hypnotized in spite of himself and even unbeknown to himself.

INDEX.

A., Mrs., magnetic subject, 30
Académie de Médecine, report to, on somnambulic perception of disease, 33
Academies, their besetting weakness, 112
Academy of Med. of Paris, and magnetism, 112
Action, mental, at a distance, 62 ; at 10 kilometers' distance, 271 ; unbeknown to the subject, 231 ; on an unwilling subject, 360
Aideia, 20 ; profound, suggestion impossible in, 77
Active somnambulism, 65 ; unfavorable to mental suggestion, 77
Angels eating turkey, 181
" Animal fluid," 299
Animals, emanations from, beneficial, 144
Anxiety of the magnetizer divined by the subject, 69
" Appalled by consequences," 293
Apparent transmission explained, 320
Arago, the word " Impossible," 9 ; on doubt and incredulity, 298
Aristotle's question as to a sixth sense, 306
Ars, the Curé of, 165
Association of ideas in tricks of præstigiation, 18 ; theory of, as yet very incomplete, 36, 57, 128
Attention, concentrated in magnetic sleep, 11 ; psychology of, 17
Attraction, magnetic, 21, 26 ; suggesting the idea of " animal magnetism," 300 ; Bruno's case of, 264 ; attractions, opposite, 203
Augustin, St , on soothsaying, 165

Authors Quoted.

Aksakof, 204. Anonymous, *Réflexions sur la Magnét Anim.*, 111; *Propagateur du Magnét. Anim.*, 240; *Suite de Mémoires pour servir à l'Hist. du Magnét.*, 199 ; *Relation* (of occurrences at Loudun), 262 ; *Théâtre Sacré des Cévennes*, 150. Arago, *Éloge de Bailly*, 9. Augustinus, *Contra Academicos*, 165. Baragnon, P., *Magnét. Anim.*, 148, 153, 194. Barrier, *apud* Charpignon, 195. Barth, *Sommeil Non-naturel*, 341. Baumgärtner, K. N., *Physiognomice Pathologica*, 289. Beaunis, H., *Conditions de l'Activité Cérébrale*, 200; *Un Fait de Suggestion Mentale*, 201. Berna, *Expériences et Considérations*, 202 ; *Réfutation du Rapport fait par Dubois*, id. Bernheim, *Suggestion dans l'État Hypnot.*, 231, 360. Bertrand, A., *Magnét. Anim. en France*, 109, 111, 151, 167, 269, 290 ; *Traité du Somnamb.*, 108, 294. Billot, *Recherches Psychol.*, 297. Bottey, J , *Magnét. Anim.*, 220. Bouchut, *Contagion Nerveuse*, 314. Braid, *Neurypnology*, 221. Brown-Séquard, in pref. to *Neurypnology*. Bruno, *apud* Gauthier, 130; *apud* Deslon, 131; *apud* Lausanne, 264. Burdin and Dubois, *Hist. Academ. du Magnét. Anim.*, 183, 268. Cabanis, *Rapports du Physique et du Moral*, 145. Calmeil, *Folie*, 173. Chardel, *Essai de Psychologie Physiol.*, 296. Charpignon, *Physiol., Méd., etc., du Magnét.*, 116, 141, 182. Comet, Dr , *Report to Acad. of Med.*, 188 ; *Vérité aux Médecins*, 189. Cullère, *Magnétisme et Hypnot.*, 232. Dampierre, Marquis de, *Magnét. Anim.*, 262. Debay, A., *Hygiène des Douleurs*, 123. Deleuze, *Hist. Critique, etc.*, 152, 178, 259, 300; *Instr. Prat.*, 132, 155, 178 ; *Opinion de van Helmont sur la Cause du Magnét.*, 263.

Demangeon, J. B., *Imagination Considérée dans ses Effets*, 344. Despine, P., Jr., *Etude sur le Somnamb* , 181, 311, 313 ; *Psychologie Naturelle*, 236. Despine, P., Sen., *Observations de Méd. Pratique*, 216. Dupotet, *Art d'Appliquer le Magn. Anim. à la Thérapeutique*, 265 ; *Expériences Publiques sur le Magn. Anim.*, 226 ; *Manuel de l'Étudiant Magnétiseur*, 138 ; *Traité Complet du Magn. Anim.*, 267. Dusart, 271. Ennemoser, *Der Magnetismus nach der allseitigen Beziehung*, 263. Faria, *Sommeil Lucide*, 177. Fèvre, *Altérations du Syst. Cutané dans la Folie*, 124. Figuier, L., *Hist. du Merveilleux*, 168, 176, 290. Foissac, *Rapports et Discussions*, 176. Fournel, *Probabilités du Somnambulisme*, 196. Frappart, *Lettres sur le Magnét.*, 189. Galen, *Methodus Medendi*, 145. Gassicourt, Cadet de, 122. Gauthier, A., *Traité du Magnét.*, 129, 212, 285. Glay, E., *Sommeil Provoqué à Distance*, 246. Grasset, *Thermométrie Clinique*, 121. Gregory, Wm., *Mesmerism, etc.*, 187. Haan, H., *Beziehungen zwischen Hypnotismus und Cerebraler Blutfüllung*, 341. Hack-Tuke, *Body and Mind*, 344. Hammond, Wm. A., 123. Héricourt, *Somnamb. au dehors de l'Hystérie*, 259, 275. Hippocrates, 122. Hufeland, *Kunst das Mensehl. Leben zu Verlängern*, 145. Janet, Pierre, sundry *Notes*, 156, 244, 257, 277. Joly, H., *L'Imagination*, 183. Jussieu, 144. Kardec, Allan, *Livre des Esprits*, 296 ; *Livre des Médiums*, 297. Kerner, J., *Franz Anton Mesmer*, 261, 309. Lafontaine, *Art de Magnétiser*, 180, 200, 201, 270, 302 ; *Mémoires*, 139, 146, 157, 180, 200. Lamenardière, Pilet de, *Démonomanie de Loudun*, 171, 172. Langlois, A. M., *Sommeil Naturel et Artificiel*, 341. Lausanne, *Principes du Magnét.*, 129. Lebrun, F., *Transmission des Douleurs*, 137. Lecat, *Traité des Sensations*, 299. Liébeault, *Etude sur le Zoomagnétisme*, 248 ; *Sommeil et États Anal.*, 344. Liégeois, *Suggestion Hypnot.*, 236. Mabru, E., *Les Magnétiseurs Jugés par Eux-mêmes*, 299. Mainduc *apud* Deleuze, 131. Maricourt, Count de, *Souvenirs d'un Magnétiseur*, 153, 187. Mesmer, F. A., *Mémoire*, 236, 304. Montgéron, Carré de, *Idée de l'État des Convulsionnaires*, 170. Monin, Dr., *Odeurs du Corps Hum.*, 122, 125. Morin, A. S., *Les Lucides d'autrefois*, 165 ; *Magnétisme, etc.*, 188, 287. Noizet, le Gén., *Mémoires sur le Somnambulisme*, 182, 184, 195. Ochorowicz, J.: *Force as Motion*, 333 ; *Méthode des Recherches Psychol.*, 321 ; *Projet d'un Congrès de Psychol.*, 162 ; *The Magnet and the Hand*, 263. Parville, H. de, *L'Électricité et ses Applications*, 332. Perronet, Claude, *Magnét. Anim.*, 155, 182, 211, 242, 319. Perty, *Anthropologie*, 123. Petetin, *Électricité Animale*, 176, 177 ; *Phénomènes que présente la Catalepsie, etc.*, 176. Phillips, *Cours Théorique et Pratique de Braidisme*, 354. Pigeaire, *Puissance de l'Électr. Anim.*, 117, 145, Poncet, *apud* Bertrand, 150. Preyer, *Erklärung des Gedankenlesens*, 180. *Proc. Soc. Psych. Research*, 159. Puységur, *Magnét. Anim.*, 175, 317; *Mémoires*, 175 ; *Recherches, Expériences, etc.*, 175, 213. Rambosson, J., *Phénomènes Nerveux, Intellectuels, etc.*, 315. Redard, *Thermométrie Clinique*, 121. *Report of Com. of Acad. of Med.*, 113. Ribot, Th., *Diseases of Memory*, 273 ; *Psychological Heredity*, 344. Richer, Paul, *Hystéro-Épilepsie*, 166. Richet, *Un Fait de Somnamb. à Distance*, 244. Roze, J., *Révélations du Monde des Esprits*, 297. Scoutetten, *Évolution Médicale*, 121. Séré, E. L. de, *Application du Somnamb. Magnét. au Diagnostic*, 126, 174. Spiller, *Gott im Lichte der Naturwissenschaften*, 313. Teste, *Manuel Prat. du Magnétiseur*, 181; *Magnét. Anim.*, 181. Tissot, J., *L'Imagination*, 184. Van Helmont, J. B., *Opera*, 263. Vidal, *Surgery*, 122. Voisin, *Suggestion chez les Aliénés*, 238.

Automaton, the somnambule is an, 298

Awakening a subject by mental suggestion, 229

B. Mrs., subject of experiments at Havre, 82-90 ; crosses the town at the mental order of Dr. Gibert, 87-88 ; other experiments with, 156, 247, 249 *et seq.*, 277 *et seq.*; how magnetized, 243.
Ballroom, experiment in a, 16
Baréty, Dr. A., his experiments, 42 *et seq.*
"Barriers of nature," 291
Beaunis, Prof. H., how he came to believe in animal magnetism, 200
Beds warmed and beds braziered, 145
Bernheim denies that one can be magnetized against his will, 331, 360
Bertrand, Dr. A., on somnambulism and magnetism, 106
Beware of suggestion, 149
Bi-lateral rapport, 28
Bouilland suspects trickery in Edison's phonograph, 291
Braid on difference between hypnotism and magnetism, 220 ; his researches on phrenology, 224
Brain, action of, on brain, 338
Brown-Séquard's criticism of mental suggestion, 326 ; transmission of accidental lesions, 344
Bruno, his study of magnetism, 129 *et seq.*; on magnetic attraction, 264
Bucaille, Mary, 109

C., Prince, a magnetic subject, 29
Cabanis's dictum, 298
Capivaccius, 145
Castellan, story of, 233 *et seq.*
Caston, Vicomte de, 17
Catalepsy and lethargy, 36-7
Cats, sleeping, discern differences in touch, 11
Cazot, a magnetic subject, 229
Céline, a magnetic subject, 113
Cévennes, Shakers of the, 150
Chance, brings amazing coincidences, 5
Charcot, his "three phases," 251
Chevalier, Mrs., a magnetic subject, 226
Cholera, most fatal to hypnotizable persons, 124
Clairvoyance, 31
Clarissa, somnambulist, her feats, 180
Collusion, Mabru's explanation of somnambulism, 298
Comet, Dr., how convinced of the reality of animal magnetism, 188
Common sense, a variable quantity, 6 ; proved fallacious, 6
Communication between minds, 152
Community of sensations, 157 *et seq* ; of minds, 164
Complementary imagination, 23
Concentration, a character of magnetic somnambulism, 213
Conjecture, suggestion by, 12, 16
Consequences must not arrest the search for truth, 293
Contagion, psychic, nervic, physical nervic, 117, 135, 141-2
Convulsionaries of Saint-Médard, 109, 150
Crime, somnambules ordered to commit, 293
Crisis in magnetism, 110
Cumberland and "mind-reading," 40
Cumberlandism, factors of success in, 42
Currents, magnetic, 25 ; tonic, 130 ; of air, sensation of, in presence of some patients, 120

D., Count Paul de, a magnetic subject, 28, 215
D., Countess, a magnetic subject, 29
D., Mrs., a magnetic subject, 51-6, 244
Dampierre, Marquis de, on magnetizing an unwilling subject, 262
David, King, 145
Deferred suggestions, 249
Deleuze, opposed to magnetic experiments, 178
Demagnetization, 302
Descartes on action of mind on matter, 296
Desjardins, his condemnation of hypnotism, 298
Despine, Jr., Dr. P., his "Natural Psychology," 106 ; his theory of thought-transmission, 311 ; his universal fluid, 314
Despine, Sr., his experiments, 214, *et seq.*
Determinism, 53
Diagnosing diseases, 118 ; by the countenance, 289
Discoverers of forgotten facts, 175
Disease, divined by touch, 32 ; symptoms of, transmitted, 34 ; diseased organs

betokened by sensations of heat or cold and otherwise, 120, 131 *et seq.*; diseases "caught" by magnetizers, 118, 137; divined by somnambules, 107 *et seq.*, produced by ideorganic association, 128; specific odors of, 122; sympathism of, 295
Donato, and his subject, Lucile, 21 *et seq.*; experiment in mental suggestion, 203 *et seq*
Dreaming and the waking state, 12
Du Bois-Reymond's multiplier, 328
Du Potet on magnetization by contact, 137-8; without contact, 139; experiments by, 238 *et seq.*; on action at a distance, 265-7
Dynamic ghost, 48; correlate, 331, 336

Education, magnetic, 21, 272 *et seq.*
Elective anæsthesia, 221
Electricity, development of, accompanies every action in Nature, 332; and galvanism, their analogies in animal magnetism, 160
Envelope trick, 18
Equilibration between organisms, 143
Equilibrium, nervic, 34
Errors, popular, often based on truth, 309
Exaltation of senses unfavorable to mental action, 338; exalted perception, 286, 322
Exhaustion, fatigue, etc., of the magnetizer, 133-4
Explanation, scientific, meaning of, 320
Experiments always instructive, 10
Expression, natural and involuntary, of thought, 321
Extranes, action of, not perceived by magnetic subject, 149, 222

Familiar spirit, 297
Faria, his method, 177
Fascination, 29, 86
Fluid, magnetic, 25; universal, theory of a, 303; vital, 302; fluid-emission theory of magnetism, 301; fluidic action, 38
Foissac, challenge to the Acad. of Med., 112; experiments, 229
Force, molecular motion, 329; and inertia, the terms, 330
Fraud, unconscious, vitiating experiments, 5

Gall's phrenology, 224
Gaston, Prince, what he witnessed at Loudun, 167
Georget, converted to belief in magnetism, 269
Gestures, use of, in magnetism, 196
Ghost of a book, 47
Gibert, see *Janet*
Giving one's aches to another, 33
Grandier, Urban, convicted of sorcery, 168 *et seq.*
Guyon, Mme., 106; as a mind-reader, 173

Habit, effects of, passing for effects of suggestion, 19-21
Hair, diagnosis by, 126
Hands, exhaustion of the, 102
Hartmann's Unconscious, the great præstigiator, 18
Havre, experiments at, 81-97; conditions of, 83
Headache transmitted and retransmitted, 101
Health transmissible, 142
Hereditary transmission, 344
Héricourt's action from a distance, 276
Hughes, and the microphone, 24
Husson's report to the Acad. of Med. on magnetism, 113
Hyperacusia, 22
Hypnoscope, a means of diagnosis, 351 *et seq.*
Hypnotic monomania, 86; sensibility, not conditioned on hysteria, 166
Hypnotism, different from animal magnetism, 10, 11, 26, 223, 302, 326; as a medical agent, 31
Hysteria not a condition of hypnotic sensibility, 166

Ideas, association of, with physical states, 128; see *Association;* producing sensations, 357
Ideoplasty, 25; defined, 354; passive, 353; positive and negative, 355; of movements, 355; material, or trophic, 356; of sensations, 357

Ideorganic associations, 128
Imagination, complementary, 23
Imponderable fluid, a contradiction, 316
Impossible, 9
Induction of states in a somnambule, 160
Infants, sleeping, magnetizable, 247
Inoculation by contact, 137; without contact, 139
Insane, endorming the, 237
Insensibility of somnambules, 154; depends on the temperament of the magnetizer, 155
Instruments, stringed, analogy between, and nerves, 301
Intoxication transmitted, 146 *et seq.*
Isaure, Miss, a magnetic subject, 214
Isolation, of the magnetized subject, 11, 148; a character of magnetic somnambulism, 213

J., Miss, Dusart's magnetic subject, 271

La Bruyère, saying of, 298
Lacombe, Father, 106
Lafontaine, exhibits action at a distance, 270; theory of mental action, 302
Language, imperfection of, 58; languages, strange, understood and spoken by energumens and somnambules, 170-2
Latent sensations, 149; transmission, 163
"Legitimists" of science, 129
Leibnitz's two watches, 24
Lemberg, experiments at, 21, 25
Liébeault, on magnetizing infants, 247
Light and heat compared to the "magnetic fluid," 301
Loudun, nuns of, 167 *et seq.*, 262
Lucile and Donato: see *Donato*

M., Mrs., a magnetic subject, 60-76, 261; attempts suicide, 61
Magdeleine, Puységur's somnambule, 197
Magnetic attraction, 21, 26; currents, 25; fluid, 25; mobility, according to Puységur, 213; passes, 80; sleep, 11, 110
Magnetism and hypnotism differentiated: see *Hypnotism*
Magnetized subject, isolation of, 11
Magnetizer and stranger, difference between, for the subject, 10; and subject, 328; magnetizer's personality as a factor in magnetism, 324
Maricourt, Count de, and the somnambule, 187
Médecins, 110
Medical men's bigotry, 248
Mental action, conditions of, on part of operator, 324; on part of subject, *ib.*; on a waking subject, 325; mental sounds, 163; suggestion simulated, 23; suggestion, direct, possible only in one special somnambulic state, 77
Mesmer, his theory, 304; on metaphysical abstractions, *ib.*; different states of matter, *ib.*; the universal fluid, 305; why he used the term "animal magnetism," 306; inner sense, *ib.*; theory of will-transmission, 307; pre-sensation, 308
Microphone, its real action, 24
Mimosa pudica, 343
Mind-reading, 40
Minutes of a meeting, written in advance, 19
Mr. Camille, the story of, 39
Monoideism, 20; two phases of, 78; passive, favorable to mental suggestion, 78
Morin's theory of thought communication, 287
Mother and fœtus, sympathism of, 344
Motion transformed according to the medium traversed, 329; transformation of, 330
Motor images, 163
Muscles, tension of, betrays thought, emotion, etc., 59
Muscular suggestions, 338
Musical notes "magnetized," 262
Myers brothers, 83-90

Nascent monoideia, favorable to mental suggestion, 80
Nerve-action, producing electric currents, 341; currents, interaction of, 161; fluid, vital or magnetic, 299
Nervic contagion, 117, 135; equilibrium, 34
Nervous affections, contagiousness of, 314 *note*
Nervousness, not a condition favorable to magnetic action, 353

Newton, Isaac, on action at a distance, 312
Noizet, Gen., and the somnambule, 185
Nuns of Loudun, 167 *et seq.*, 262

Occultism and magic, sciences gone astray, 349
Ochorowicz, only of late a believer in mental suggestion, 10; experiments at Lublin, 10-14; at Warsaw, 15-20; at X., 20; at Lemberg (with Donato) 21
Odoriferous exhalations, 121
Odors, specific, of occupations, 124; of diseases, 122-126
Organic sympathism, its phases, 105

P., Count de, experiment with, 119
Pain, transmission of, 90, 135, 156
Passive somnambulism, 65
Perronet, Dr., observations on will-transmission, 209
Personality, alleged transfer of, 348, *note*
Petetin, how he was led to study magnetism, 176
Phonautograph, 333
Photophone, 334
Phrenomagnetism, 224
Physical action, direct, hypothesis of, 299; equivalents of psychic action, 322
Physiognomic, pathognomic and ideognomic signs, 59
Physiological transmission, 144
Piano played in catalepsy, 210
Playing cards, tricks with, 18
"Polarities," 38
Polyideism, 20
Poncet, 106
Popular opinions, 152
Prægstigiation, 17
'Pre-sensation," presentiment, etc., 308,
Psychic atmosphere, 18, 21, 30, 44, 57, 320; contagion, 117
Psychic action, direct, 295; action, physical equivalents of, 322; personality, 11; states, theoretically transmissible, 34; states, revealed by odors, 123
Psychical Research Soc., experiments by, 157 *et seq.*
Psychology as yet an inchoate science, 57
Psycho-physical transmission, hypothesis of, 317
Puységui, his subjects, 110; his first experience of mental suggestion, 174; his theory of mental suggestion, 317; his prevision of modern theories of physics, 318; compares thought-transference to the action of an electric machine, 318

R., Miss, a magnetic subject, 30
R., Mr., a magnetizer, and his subject, 45-47
Radiophone, 261, 334
Rapport, 10; bi-lateral, 28; will-action and, 212 *et seq.*; diverted from the magnetizer, 215; does not exist in hypnotism, 218; what it means, 326; necessary for action at a distance, 338
Reading a book without aid of the eyes, 12–13
Reciprocal enchainment, 18
Recognition of a person, meaning of, 11
Recollectedness, 148
Recollection, activity of, in somnambulism, 13
Reichenbach, 25, 48
"Regulating" a somnambule, 80, 159
Repetition of an experiment destroys its scientific value, 35, 45
Retarded transmission, 163
Reversibility, law of, 332 *et seq.*
Richet, Ch., his experiments compared with the author's, 49, 50
Robert-Houdin, his prægstigiations, 40; his study of magnetism, 189
Routine, force of, 6, 7

S., Miss, a magnetic subject, 98-103; how restrained from suicide, 99
Saint-Médard, convulsionaries of, 150
Sch., Mrs., as a magnetic subject, 30
Scientific men, attitude of, toward magnetism, 243
Second-sight, 12; spiritualist theory of, 296; and thought-transference, 183
Self-suggestion, 354
Seneca, 291
Sense-perception, heightened in somnambules, 122, 290; impaired in civilized man, 122
Shakers (*trembleurs*) of the Cévennes, 150
Sleep, why favorable to mental transmission, 308

Sleight-of-hand, 17
Smells, specific, of diseases, 122
Somnambules, keen observers, 12
Somnambulism, complete, principal characters of, 213
Spencer, H., on transmission of motion, 312
Spiritism, 297; experiments in, 12, 14
"Story of Mr. Camille," 39
"Stranger," 10; see *Extrane*
Subjective impression, 56, 60, 76, 106
Suggestion, idea of, coming into general acceptation, 9; by conjecture, 12, 16; by signs, often given unconsciously, 11
Suicide, a would-be, 38; attempted, of the subject, Mrs. M., 61
Superstition, the essence of, 152
Surin, Father, 106; his account of the possessed nuns of Loudun, 167
Suspended mental suggestion, 90
Sympathism, 116
Symptoms, transmission of, 33

Tactile sensations, 48
Taine, H. A., reported dictum of, 293
"Taking" ailments, 109
Telephone, phenomena of the, 160; and thought-transference, 328; regulating a, and "regulating" a somnambule, 80
Temperature, diagnosis by, 121
Theoretic applications of mental suggestion, 348
Thermomicrophone, invented by the author, 35
Thought, inseparable from expression, 320; a dynamic act, 332; dynamic correlate of, 331; thought-transference, a sort of audition, 77; transference compared to the action of electric machine, 318; transference, author's theory of, 340
Thoughts, identical, occurring to two or more persons, 19
"Three phases" of hypnotism increased to nine, 251
Touch, differences of, 11; peculiarities of, under magnetization, 221
Transformation of motion, 330
Transmission, mental, conditions of, 164; between homologous and different organs, 343; of maladies, 135; double transmission, *ib.*; and transformation of motion, 330
Truth, science need not fear, 9

Unconscious, experience, 127, 321; strata, 164; the, a great præstigiator, 18; the, Grand Master of Occultism, 54; the, its tricks, 37, 57
Undulationism, 319
Universal fluid, theory of a, 303

Vacuum and motion, 311
Van Helmont on magnetism, 263
Vibrations, produced by thought, 59
"Vicomte de Caston," 17
Vision without aid of the eyes, 12
Visual images, 163
Vital fluid, 302

Waking at a set hour, mechanism of, 91, waking state and polyideic somnambulism, 325
Warsaw, experiments at (subject, an Ital. lady), 14; spiritist experiments, 14-16
Will-action, denied by Bertrand, 294; denied by Lafontaine, 302; and "Rapport," 212 *et seq.*; will-transmission, 196 *et seq.*; and thought-transmission, 207, 294
"Willing," experiments on, 28-31
Wits, errors of, 298

Z., Miss, a magnetic subject, 97; endormed *nolens*, 98
Zöllner, Prof., how he was duped, 56

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